

ELECTRONIC PIANO



P-120 P-120S

ENGLISH

DEUTSCH

FRANÇAIS

ESPAÑOL

**Owner's Manual
Bedienungsanleitung
Mode d'emploi
Manual de instrucciones**

SPECIAL MESSAGE SECTION

This product utilizes batteries or an external power supply (adapter). DO NOT connect this product to any power supply or adapter other than one described in the manual, on the name plate, or specifically recommended by Yamaha.

WARNING: Do not place this product in a position where anyone could walk on, trip over, or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! IF you must use an extension cord, the minimum wire size for a 25' cord (or less) is 18 AWG. NOTE: The smaller the AWG number, the larger the current handling capacity. For longer extension cords, consult a local electrician.

This product should be used only with the components supplied or: a cart, rack, or stand that is recommended by Yamaha. If a cart, etc., is used, please observe all safety markings and instructions that accompany the accessory product.

SPECIFICATIONS SUBJECT TO CHANGE:

The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

IMPORTANT: The louder the sound, the shorter the time period before damage occurs.

Some Yamaha products may have benches and / or accessory mounting fixtures that are either supplied with the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured BEFORE using.

Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

NOTICE:

Service charges incurred due to a lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners responsibility. Please study this manual carefully and consult your dealer before requesting service.

ENVIRONMENTAL ISSUES:

Yamaha strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice:

This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

This product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix batteries with new, or with batteries of a different type. Batteries MUST be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

Warning:

Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area. Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice:

Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. If your dealer is unable to assist you, please contact Yamaha directly.

NAME PLATE LOCATION:

The name plate is located on the bottom of the product. The model number, serial number, power requirements, etc., are located on this plate. You should record the model number, serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.

Model

Serial No.

Purchase Date

PLEASE KEEP THIS MANUAL

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

* Please keep this manual in a safe place for future reference.



WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/AC power adaptor

- Only use the voltage specified as correct for the instrument. The required voltage is printed on the name plate of the instrument.
- Use the specified adaptor (PA-300 or an equivalent recommended by Yamaha) only. Using the wrong adaptor can result in damage to the instrument or overheating.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.
- Do not place the AC adaptor cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.

Do not open

- Do not open the instrument or attempt to disassemble the internal parts or modify them in any way. The instrument contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

Water warning

- Do not expose the instrument to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.
- Never insert or remove an electric plug with wet hands.

Fire warning

- Do not put burning items, such as candles, on the unit. A burning item may fall over and cause a fire.

If you notice any abnormality

- If the AC adaptor cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the instrument, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the adaptor plug from the outlet, and have the instrument inspected by qualified Yamaha service personnel.

CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the instrument or other property. These precautions include, but are not limited to, the following:

Power supply/AC power adaptor

- When removing the electric plug from the instrument or an outlet, always hold the plug itself and not the cord.
- Unplug the AC power adaptor when not using the instrument, or during electrical storms.
- Do not connect the instrument to an electrical outlet using a multiple-connector. Doing so can result in lower sound quality, or possibly cause overheating in the outlet.

Location

- Do not expose the instrument to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not use the instrument in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Otherwise, the instrument, TV, or radio may generate noise.
- Do not place the instrument in an unstable position where it might accidentally fall over.
- Before moving the instrument, remove all connected adaptor and other cables.
- Use only the stand specified for the instrument. When attaching the stand or rack, use the provided screws only. Failure to do so could cause damage to the internal components or result in the instrument falling over.

Connections

- Before connecting the instrument to other electronic components, turn off the power for all components. Before turning the power on or off for all components, set all volume levels to minimum. Also, be sure to set the volumes of all components at their minimum levels and gradually raise the volume controls while playing the instrument to set the desired listening level.

Maintenance

- When cleaning the instrument, use a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths.

Handling caution

- Do not insert a finger or hand in any gaps on the instrument.
- Never insert or drop paper, metallic, or other objects into the gaps on the panel or keyboard. If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the instrument inspected by qualified Yamaha service personnel.
- Do not place vinyl, plastic or rubber objects on the instrument, since this might discolor the panel or keyboard.
- Do not rest your weight on, or place heavy objects on the instrument, and do not use excessive force on the buttons, switches or connectors.
- Do not operate the instrument for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.

Saving data

Saving and backing up your data

- Depending upon the Backup Settings (page 40), internal data is retained for about 1 week after the power is turned off. If the period is exceeded, the data will be lost. Be sure to turn the power switch on for a few minutes at least once a week. The data could be lost due to malfunction or incorrect operation. Save important data to external media such as the Yamaha MDF3 MIDI data filer.

Backing up the external media

- To protect against data loss through media damage, we recommend that you save your important data onto two external media.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the instrument, or data that is lost or destroyed.

Always turn the power off when the instrument is not in use.

Even when the power switch is in the "STANDBY" position, electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

Introduction

Thank you for choosing the Yamaha Electronic Piano P-120/P-120S. Your P-120/P-120S is a fine musical instrument that employs advanced Yamaha music technology. With the proper care, your P-120/P-120S will give you many years of musical pleasure.

- The P-120/P-120S Electronic Piano offers unmatched sonic realism and natural grand-piano type playability with Yamaha's original "AWM Dynamic Stereo Sampling" tone generation technology for rich, musical voices, and a special "Graded Hammer" keyboard which provides graded key weight and response throughout the keyboard range. The grand piano voices feature totally new samples painstakingly recorded from a full concert grand piano.
Both GRAND PIANO 1 and 2 voices feature multiple velocity-switched samples (Dynamic Sampling), a "Soundboard Reverb" effect that accurately simulates the resonance of a piano soundboard and "Key-off Samples" that add the subtle sound produced when the keys are released. They also feature special "Sustain Samples" that recreate the unique resonance produced by an acoustic grand piano's soundboard and strings when its damper pedal is pressed.
- Dual mode allows 2 voices to be played simultaneously.
- Split mode allows different voices to be played by the left and right hands.
- The sustain pedal includes a natural resonance effect for the piano voices, simulating the string and sound-board resonance of acoustic pianos.
- Metronome feature with variable tempo facilitates practice.
- A two-track digital recorder allows the recording and playback of anything you play on the keyboard. Up to three user songs can be recorded and stored in the P-120/P-120S.
- MIDI compatibility and a range of MIDI functions make the P-120/P-120S useful in a range of advanced MIDI music systems.
- Built-in computer interface for direct connection to personal computers running advanced music software.

In order to make the most of your P-120/P-120S's performance potential and features, we urge you to read this Owner's Manual thoroughly, and keep it in a safe place for later reference.

■ Trademarks

- Apple and Macintosh are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.
 - IBM-PC/AT is a trademark of International Business Machines Corporation.
 - Windows is the registered trademark of Microsoft® Corporation.
- All other trademarks are the property of their respective holders.

Included Accessories

- Owner's Manual
- Music Stand
- Pedal
- PA-300 AC Adaptor (included or optional depending on locale)

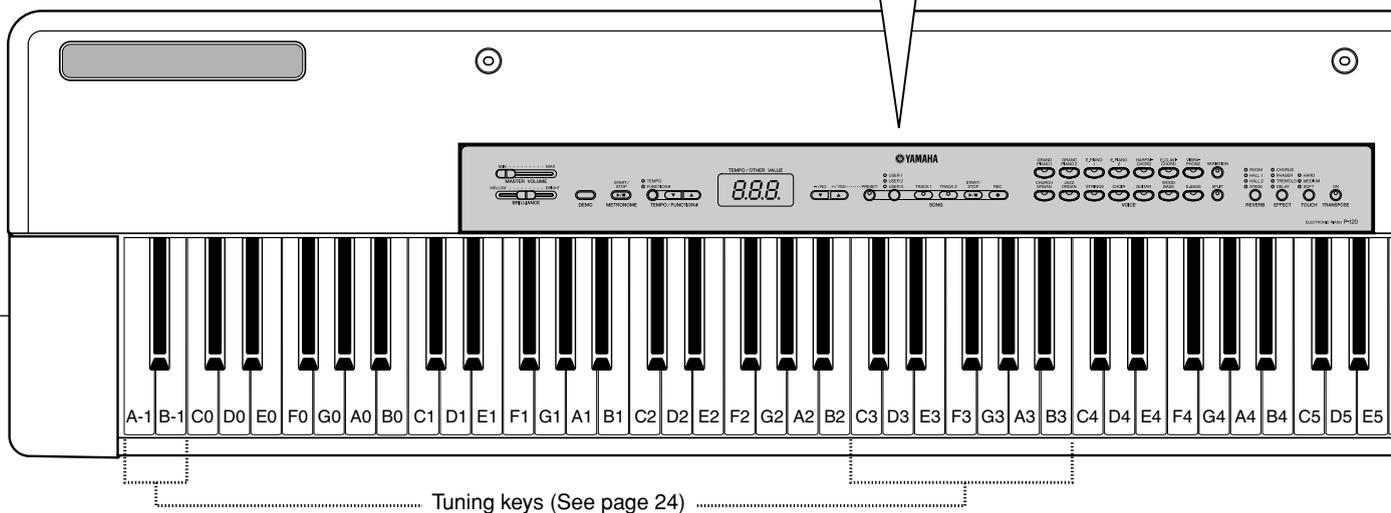
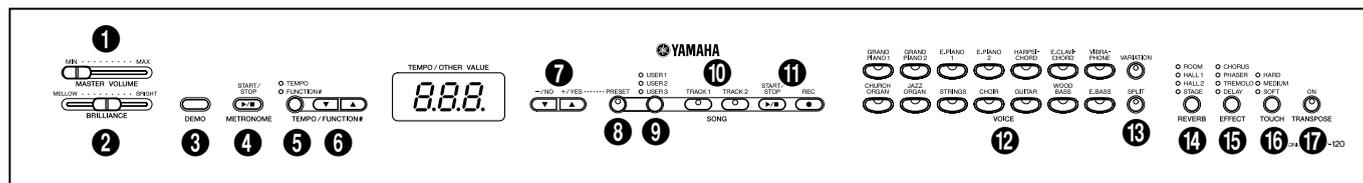
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The Control Panel



Tuning keys (See page 24)

PHONES Jacks (Left side panel) (See page 11)

1 [MASTER VOLUME] Control

The [MASTER VOLUME] control adjusts the P-120/P-120S's output volume (level).

The [MASTER VOLUME] control also adjusts headphone volume when a pair of headphones is plugged into the PHONES jack (page 11).

2 [BRILLIANCE] Control

The [BRILLIANCE] Control adjusts the tonality or “timbre” of the output sound from a mellow tone to a bright tone.

3 [DEMO] Button

Activates the demo playback mode in which you can select playback of different demonstration sequences for each of the P-120/P-120S's voices. See page 14 for details.

4 METRONOME [START/STOP] Button

Turns the metronome sound on and off. The [TEMPO/FUNCTION# ▼, ▲] buttons, are used to set the tempo of the metronome sound. The [–/NO▼] and [+ /YES▲] buttons are used to change the time signature (beat) of the metronome, if used while the METRONOME [START/STOP] button is held — page 25.

5 [TEMPO/FUNCTION#] Button

This button provides access to the TEMPO control and a range of utility functions — including the MIDI functions — which significantly enhance versatility and playability. See page 30 for details.

6 [TEMPO/FUNCTION# ▼, ▲] Buttons

These buttons adjust the tempo of the metronome function as well as the playback tempo of the song function. The tempo range is from 32 to 280 beats per minute — page 25. These same buttons are also used to select functions — page 30.

7 [–/NO▼], [+ /YES▲] Buttons

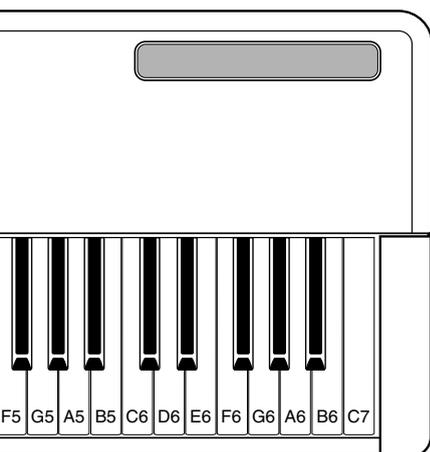
These buttons select a preset song number for playback, and are also used to adjust a range of other parameters (i.e. their “–/NO” and “+ /YES” functions).

8 SONG [PRESET] Button

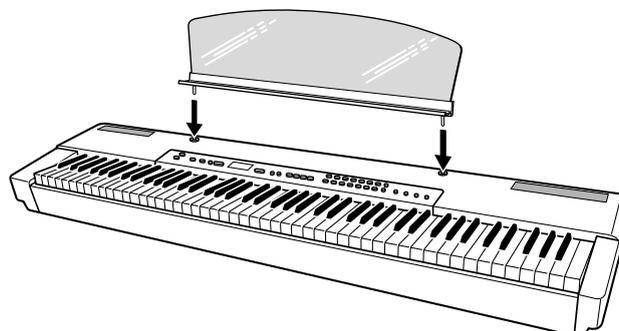
This button enters the preset song mode. While in this mode you can use the [–/NO▼], [+ /YES▲] buttons to select from 50 songs.

9 SONG [USER 1/2/3] Button

This button selects one of the Recorder's three user songs.



Music Stand



The P-120/P-120S is supplied with a music stand that can be attached to the instrument by inserting it into the holes at the rear of the control panel.

10 SONG [TRACK 1] and [TRACK 2] Buttons

The P-120/P-120S has a 2-track recorder, and these buttons are used to select the track(s) to be recorded or played back. See page 27 for details.

11 SONG [START/STOP] and [REC] Buttons

These buttons control the P-120/P-120S's user song recorder, letting you record and play back just about anything you play on the keyboard.

12 VOICE Buttons & [VARIATION] Button

Simply press any of the voice selectors to select the corresponding voice. The voice selector LED will light to indicate which voice is currently selected. Press the [VARIATION] button so that its indicator lights to select a variation of the currently selected voice.

There is also a dual mode in which two voices can be played simultaneously across the full range of the keyboard (see page 18 for details), and a split mode which allows different voices to be played by the left and right hands (see page 19 for details).

13 [SPLIT] Button

Engages the split mode, in which different voices can be played on the left- and right-hand sections of the keyboard. See page 19 for details.

14 [REVERB] Button

The [REVERB] button selects a number of digital reverb effects that you can use for extra depth and expressive power. See page 20 for details.

15 [EFFECT] Button

This button selects a number of effects which can give your sound greater depth and animation.

16 [TOUCH] Button

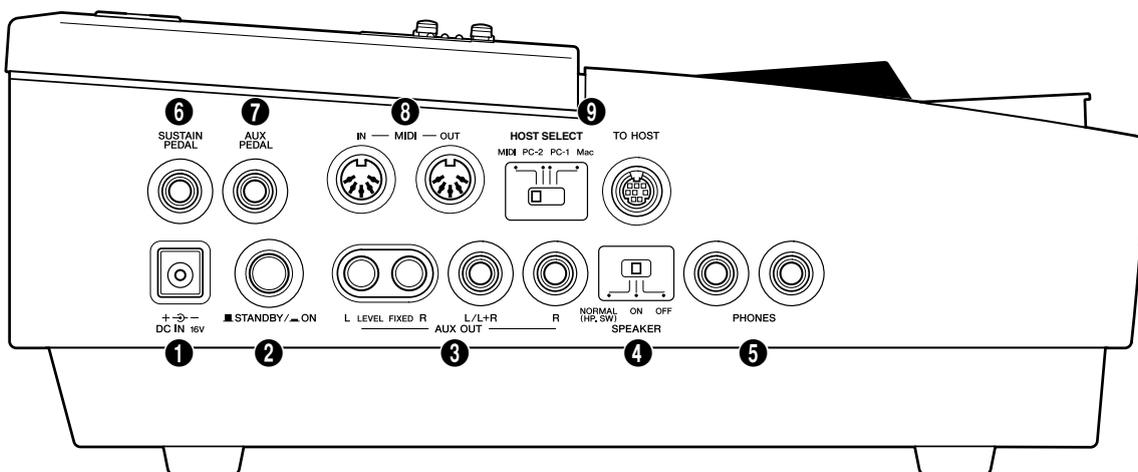
The [TOUCH] button makes it easy to adjust the touch response of the P-120/P-120S to match your playing style. See page 23 for details.

17 [TRANPOSE] Button

The [TRANPOSE] button allows access to the P-120/P-120S's TRANPOSE function (to shift the pitch of the entire keyboard up or down in semitone intervals).



Connections



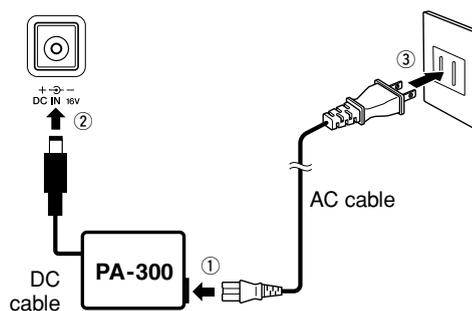
Side panel

1 DC IN 16V Jack

Make sure that the [STANDBY/ON] switch of the P-120/P-120S is set to STANDBY.

Connect one end of the AC cable to the PA-300 AC power adaptor. Connect the AC adaptor's DC cable to the DC IN 16V jack. Plug the other end of the AC cable into an AC outlet.

After turning the power OFF, simply reverse the procedure to disconnect the power.



WARNING

- Use **ONLY** a Yamaha PA-300 AC Power Adaptor (or other adaptor specifically recommended by Yamaha) to power your instrument from the AC mains. The use of other adaptors may result in irreparable damage to both the adaptor and the P-120/P-120S.
- Unplug the AC Power Adaptor when not using the P-120/P-120S, or during electrical storms.

2 [STANDBY/ON] Switch

Press the [STANDBY/ON] switch once to turn the power ON, a second time to turn the power OFF. When the power is initially turned ON, a voice selector LED will light.

CAUTION

- Even when the switch is in the "STANDBY" position, electricity is still flowing to the instrument at the minimum level. When you are not using the P-120/P-120S for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.



■ STANDBY/ON

3 AUX OUT Jacks : L and R Pin jacks (LEVEL FIXED), L/L+R and R Phone Jacks

The P-120/P-120S is equipped with both Pin and Phone AUX OUT jacks to deliver the output of the P-120/P-120S for connection to an instrument amplifier, mixing console, PA system or recording equipment. The Pin connectors (L and R) provide easy connection to a home audio system, etc. The L/L+R Phone Jack allows connection of the P-120/P-120S to a monaural sound system. When a plug is inserted into the L/L+R jack only, the left- and right-channel signals are combined and delivered via the L/L+R jack so you don't lose any of the P-120/P-120S's sound.

CAUTION

- **Before connecting the P-120/P-120S to other electronic components, turn off the power for all components. Before turning the power on or off for all components, set all-volume levels to minimum.**
- **When turning the power on, first turn the P-120/P-120S's power on and then turn the power on of the external amplifier/speaker system. When turning the power off, simply reverse the order.**

NOTE

- Make sure that a low resistance audio cable or adaptor plug is used.
- The [MASTER VOLUME] control on the P-120/P-120S has no affect on the sound that is delivered from the AUX OUT (LEVEL FIXED) jacks.

4 SPEAKER Switch

This switch turns the internal speakers on or off.

NORMAL (HP. SW)

The speakers produce sound as long as a pair of headphones is not connected.

ON

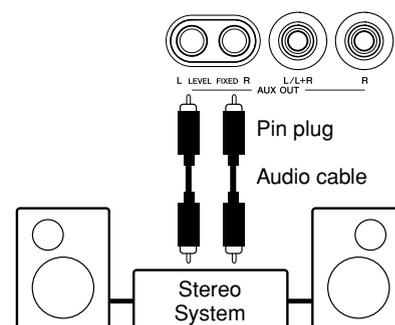
The speakers always produce sound.

OFF

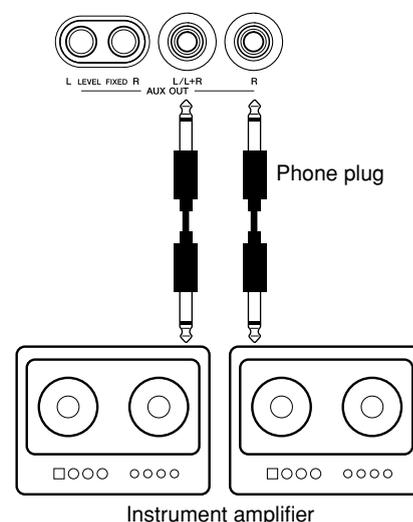
The speakers produce no sound.

5 PHONES Jacks

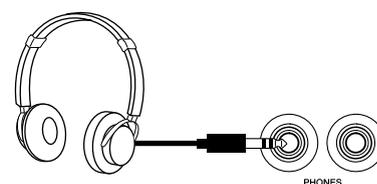
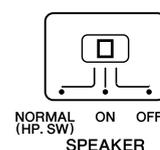
Two sets of standard stereo headphones can be plugged in here for private practice or late-night playing.



Use when the volume is controlled from an audio device or for recording to an external device. The P-120/P-120S's [MASTER VOLUME] control has no affect. (Pin Jack: LEVEL FIXED)



Use when the volume delivered from an audio device is controlled with the P-120/P-120S's [MASTER VOLUME] control. (Phone Jack)



Connections

6 SUSTAIN PEDAL Jack

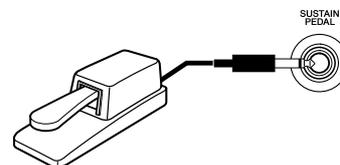
This jack is for connecting a sustain pedal to the P-120/P-120S. The pedal functions in the same way as a damper pedal on an acoustic piano. Connect the supplied pedal to this jack and press the pedal to sustain the sound. The further down the pedal is pressed, the longer the sound will be sustained (can be used like a half pedal effect).

When the GRAND PIANO 1 and 2 voices are selected, pressing the damper pedal activates the instrument's special "Sustain Samples" to accurately recreate the unique resonance of an acoustic grand piano's soundboard and strings.



NOTE

- Make sure that power is OFF when connecting or disconnecting the pedal.
- The depth of the effect produced by the "Sustain Samples" can be adjusted via the "Pedal Functions" (page 35) in the function mode.
- Depending upon the pedal that is connected to the SUSTAIN PEDAL jack, the effect produced by operating the pedal (ON/OFF, dynamics, etc.) might be reversed. If this is the case, refer to the "SUSTAIN PEDAL Type" section (page 36).



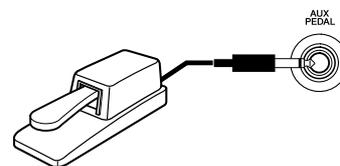
7 AUX PEDAL Jack

This jack is for connecting the supplied pedal, an FC7 foot controller or an FC4 foot switch. A wide range of functions such as the Soft Pedal function, etc., can be assigned to this jack. Use the Function settings to assign the function. (see page 35)



NOTE

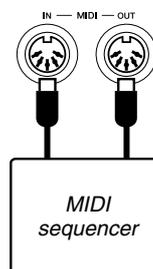
- The FC7 Foot Controller can be used to control "Expression" (page 35).
- Depending upon the pedal that is connected to the AUX PEDAL jack, the effect produced by operating the pedal (ON/OFF, dynamics, etc.) might be reversed. If this is the case, refer to the "AUX PEDAL Type" section (page 36).



8 MIDI IN, and OUT Connectors

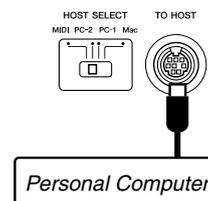
The MIDI IN connector receives MIDI data from an external MIDI device (such as a MIDI sequencer) which can be used to control the P-120/P-120S. The MIDI OUT connector transmits MIDI data generated by the P-120/P-120S (e.g. note and velocity data produced by playing the P-120/P-120S keyboard).

More details on MIDI are given in "MIDI Functions" on page 37.



9 TO HOST Connector & HOST SELECT Switch

This jack and selector switch allow direct connection to a personal computer for sequencing and other music applications — without the need for a separate MIDI interface. See page 41 for details.





Selecting & Playing Voices

Before turning the power ON or OFF for all components, set all volume levels to minimum. For instructions on connecting the P-120/P-120S to an amplifier/speaker system, see page 11.

1 Turn Power On

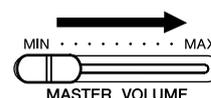
After making sure that the P-120/P-120S's AC power adaptor is properly plugged into the P-120/P-120S itself and plugged into a convenient AC wall outlet, press the [STANDBY/ON] switch located on the left-side panel of the P-120/P-120S.

When the power is turned ON, one of the voice selector LEDs will light.



2 Set the Volume

Initially set the [MASTER VOLUME] control about half way between the "MIN" and "MAX" settings. Then, when you start playing, re-adjust the [MASTER VOLUME] control for the most comfortable listening level.

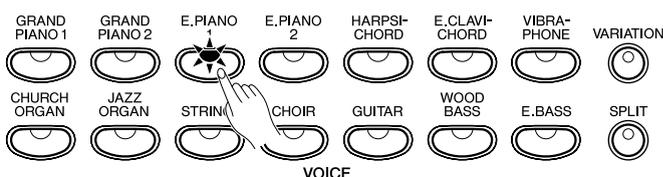


3 Select a Voice

Select the desired voice by pressing one of the VOICE buttons. Use the [VARIATION] button to select a variation of the current voice, as required. Every time the [VARIATION] or currently selected VOICE button is pressed, the variation is turned on or off. When the indicator is lit, the variation voice is selected.



- Please refer to the "Voice Descriptions" section (page 45) for information on the characteristics of each of the voices and their variations.
- The pedal can also be used to turn the variation on or off as required. (see page 35)



4 Play

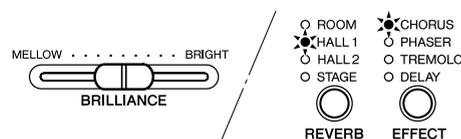
The P-120/P-120S also offers keyboard touch response, so the volume and timbre of notes played can be controlled according to how "hard" you play the keys. The amount of variation available depends on the selected voice.



- Some voices do not have keyboard touch response. See "Voice Descriptions" on page 45 for details.

5 Add Effects As Required.....

You can add or change reverb, effects and brilliance as desired by using the [REVERB] button (page 20), [EFFECT] button (page 21) and the [BRILLIANCE] control (page 22).





Playing the Demonstration Tunes

Demonstration tunes are provided that effectively demonstrate each of the P-120/P-120S's voices. There are also 50 preset songs that you can play individually, all in sequence, or in random order. Here's how you can select and play the demo tunes.



- The demo or preset song mode cannot be engaged while a user song recorder (page 26) is in use.
- No MIDI reception occurs in the demo/preset song mode.
- The demo/preset song data is not transmitted via the MIDI connectors.

* Voice demo songs consist entirely of Yamaha original songs (© 2001 YAMAHA CORPORATION).

* See page 48 for a complete listing of the preset songs.

Voice Demo

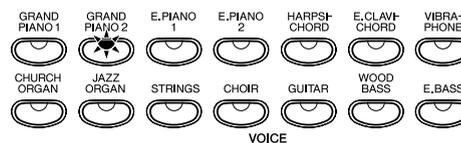
1 Engage the Demo Mode.....

Press the [DEMO] button to engage the demo mode — the voice selector indicators will flash in sequence.



2 Play a Voice Demo

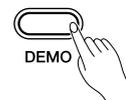
Press one of the voice selectors to start playback of all songs starting from the corresponding voice demo tune — featuring the voice normally selected by that voice selector button. (If you press the SONG [START/STOP] button instead of a voice selector button, the GRAND PIANO 1 demo tune will begin playback.) The indicator of the selected voice selector button will flash during playback, and “- - -” will appear on the LED display. You can start playback of any other voice demo tune during playback by simply pressing the corresponding voice selector. You can stop playback at any time by pressing the SONG [START/STOP] button or the voice selector of the currently playing demo.



- Use the [MASTER VOLUME] control to adjust the volume and the [BRILLIANCE] control to adjust the brilliance (page 22).

3 Exit From the Demo Mode

Press the [DEMO] button to exit from the demo mode and return to the normal play mode.



Preset Song

1 Engage the Preset Song Mode.....

Press the [PRESET] button to engage the preset song mode — the [PRESET], [TRACK 1] and [TRACK 2] indicators will light.

2 Play a Preset Song

To play any of the 50 preset songs provided, use the [–/NO▼], [+/YES▲] buttons to select the number of the tune you want to play (the number will appear on the LED display), then press the SONG [START/STOP] button. Playback will stop automatically when playback of the selected preset song has finished.

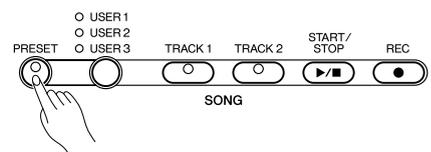
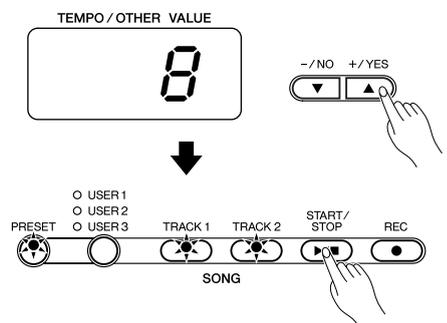
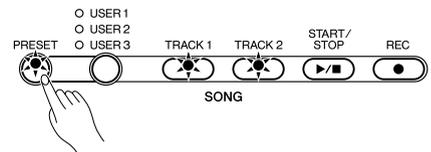
Select “RL L” instead of a number to play all preset songs in sequence, or select “r n d” to continuously play all preset songs in random order. Press the SONG [START/STOP] button to stop playback.

NOTE

- Use the [MASTER VOLUME] control to adjust the volume.
- You can use the [TEMPO/FUNCTION# ▼,▲] buttons to adjust the playback tempo as required. This produces a relative tempo variation, with a range from “-50” through “ - - - ” to “50” at maximum; the range will differ depending on the selected song.
- The default tempo “ - - - ” is automatically selected whenever a new preset song is selected, or playback of a new preset song begins during “RL L” or “r n d” playback.
- You can play the keyboard along with the preset song playback. The voice playing on the keyboard can be changed.
- You can change the Brilliance control and Reverb type that is applied to the voice you play on the keyboard and for the preset song playback. You can change the Effect type and Touch sensitivity that is applied to the voice you play on the keyboard. When a new preset song is selected or a new preset song is automatically started in continuous play, a reverb type that is appropriate for the selected song will automatically be selected.

3 Exit From the Preset Song Mode

Press the [PRESET] button to exit from the preset song mode, the indicator will go off, and return to the normal play mode.



Preset Song A-B Repeat

The A-B Repeat function can be used to continuously repeat a specified phrase within a preset song. Combined with the Part Cancel function described below, this provides an excellent way to practice difficult phrases.

1 Specify the Beginning (A) of the Phrase

Select and play a preset song, then press the [TEMPO/FUNCTION#] button at the beginning of the phrase you want to repeat. This sets the “A” point (“A - ” will appear on the display).

To set the “A” point at the very beginning of the song, press the [TEMPO/FUNCTION#] button before starting playback.

2 Specify the End (B) of the Phrase

Press the [TEMPO/FUNCTION#] button a second time at the end of the phrase. This sets the “B” point (“A - b” will appear on the display). At this point repeat playback will begin between the specified A and B points. The metronome will sound when playback begins to give you a tempo reference. However, if playback repeats from the beginning of the song, there will be no tempo reference from metronome.

To set the B point at the song’s end, press the [TEMPO/FUNCTION#] button after song playback is complete and before “A - ” disappears from the display.

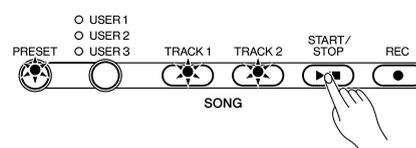
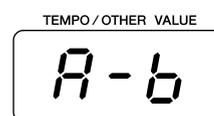
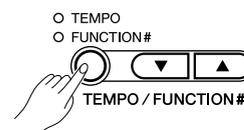
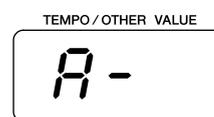
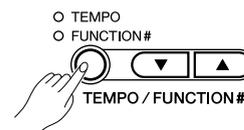
3 Stop Playback

Press the SONG [START/STOP] button to stop playback while retaining the specified A and B points. A-B repeat playback will resume if the SONG [START/STOP] button is then pressed again.

To cancel the A and B points press the [TEMPO/FUNCTION#] button once.



- The A and B points are automatically canceled when a new song is selected.
- The A-B Repeat function cannot be used during “ALL” or “END” playback.



Preset Song Part Cancel

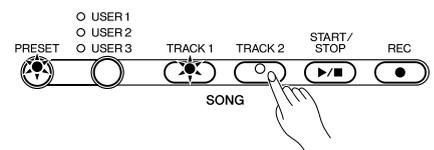
The 50 preset songs have separate left- and right-hand parts that can be turned on and off as required so you can practice the corresponding part on the keyboard. The right-hand part is played by [TRACK 1], and the left-hand part is played by [TRACK 2].

1 Turn the Desired Part Off

Press the [TRACK 1] or [TRACK 2] button to turn the corresponding part off — the corresponding indicator will go out (these buttons alternately toggle the corresponding part on and off).

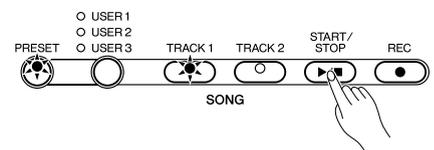


- The parts can be turned on or off even during playback.
- The Preset Song Part Cancel function cannot be used during “R L L” or “r n d” playback.
- The “Preset Song Part Cancel Volume” function described on page 36 can be used to set the canceled part so that it plays at a volume from “0” (no sound) to “20”. The default setting is “5”.
- Both parts are automatically turned ON whenever a new song is selected.



2 Start/Stop Playback.....

Press the SONG [START/STOP] button to start and stop playback as required.



☐ Synchro Start

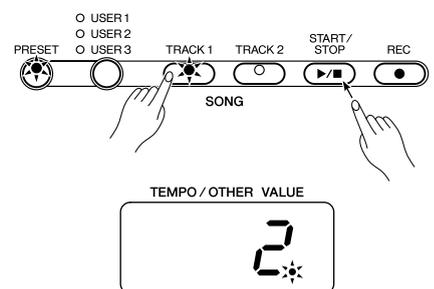
When the Synchro Start function is engaged, playback of the selected preset song will begin automatically as soon as you start playing on the keyboard.

To engage the Synchro Start function press the SONG [START/STOP] button while holding the part button corresponding to the part which is ON. A dot will appear in the lower right corner of the display. (Repeat the previous operation to disengage the Synchro Start function.)

Playback will then start as soon as you begin playing on the keyboard.



- If you hold a track button which is OFF while pressing the SONG [START/STOP] button, that track will be turned ON and the Synchro Start mode will be engaged.



☐ AUX PEDAL Start/Stop.....

The AUX PEDAL can be assigned to start and stop preset song playback via the “AUX PEDAL Mode” function described on page 35.

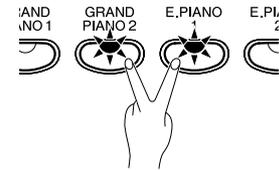


The Dual Mode

The dual mode makes it possible to play two voices simultaneously across the entire range of the keyboard.

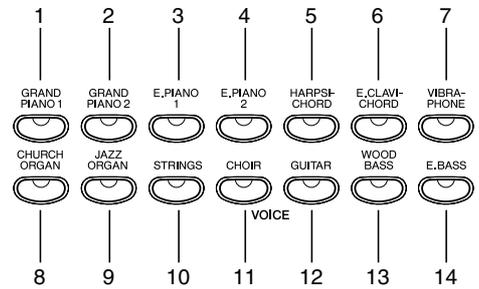
To activate the dual mode simply press two voice selectors at the same time (or press one voice selector while holding another). The voice indicators of both selected voices will light when the dual mode is active. To return to the normal single-voice play mode, press any single voice selector.

According to the voice numbering priority as shown in the diagram on the right, lower valued voice numbers will be designated as the 1st Voice (the other voice will be designated as the 2nd Voice).



- The dual and split modes cannot be engaged at the same time.
- **[VARIATION] in the Dual Mode**
The [VARIATION] button's indicator will light if the variation is engaged for either or both of the dual-mode voices. While the dual mode is engaged, the [VARIATION] button can be used to turn the variation for both voices on or off. To turn the variation on or off for only one of the voices, hold the voice button of the other voice and press the button of the voice for which you want to change the variation then press the [VARIATION] button.
- **[EFFECT] in the Dual Mode**
Depending upon the conditions one effect type will take priority over the other. Depth will be decided according to the depth default value of the voice combination. However, using function F3 (see page 32) you can change the depth value for each voice as you like. Effect depth setting via the panel controls the [-/NO▼] or [+ /YES▲] buttons while holding the [EFFECT] button — see page 21) will be applied to the 1st Voice only.
- **[REVERB] in the Dual Mode**
The reverb type assigned to the 1st Voice will take priority over the other. (If the reverb is set to OFF, the 2nd Voice's reverb type will be in affect.) Reverb depth setting via the panel controls (i.e. pressing the [-/NO▼] or [+ /YES▲] buttons while holding the [REVERB] button — see page 20) will be applied to the 1st Voice only.

Voice numbering priority



Other Dual Mode Functions.....

The P-120/P-120S Function mode provides access to a number of other dual-mode functions, listed below. See the corresponding pages for details.

- Dual Balance32
- Dual Detune.....32
- 1st Voice Octave Shift.....32
- 2nd Voice Octave Shift.....32
- 1st Voice Effect Depth.....33
- 2nd Voice Effect Depth33
- Reset33



The Split Mode

The split mode makes it possible to play two different voices on the keyboard — one with the left hand and another with the right hand. The Left Voice is played on all keys to the left of (and including) a specified “split point” key, while the Right Voice is played on all keys to the right of the split point key.

To activate the split mode simply press the [SPLIT] button so that its indicator lights. The split mode can be turned off at any time by pressing the [SPLIT] button again so that its indicator goes out.

NOTE • The dual and split modes cannot be engaged at the same time.

Selecting the Right and Left Voices

The voice that was selected before the split mode was engaged becomes the Right Voice in the split mode. (The Right Voice can also be changed while in the split mode, by simply pressing the corresponding voice selector.)

To select a Left Voice press the corresponding voice selector while holding the [SPLIT] button (default: [WOOD BASS]). The indicator of the Left Voice selector will light while the [SPLIT] button is pressed, then only the Right Voice selector and [SPLIT] button indicators will remain lit.

To turn the variation on or off for the split voice, hold the [SPLIT] button and press the [VARIATION] button or the currently selected voice button.

NOTE • **[VARIATION] in the Split Mode**
The variation can be individually turned on and off for the split mode voices. Normally the voice indicator of the Right Voice lights in the split mode. The [VARIATION] can be used to turn the variation for the Right Voice on or off as required. While the [SPLIT] button is held, however, the voice indicator of the Left Voice lights, and in this state the [VARIATION] button can be used to turn the variation for the Left Voice on or off as required.

• **[EFFECT] in the Split Mode**
Depending upon the conditions, one effect type will take priority over the other. Depth will be decided according to the depth default value of the voice combination. However, using function F4 (see page 33) you can change the depth value for each voice as you like.
Effect depth setting via the panel controls (i.e. pressing the [–/NO▼] or [+ / YES▲] buttons while holding the [EFFECT] button — see page 21) will be applied to the Right Voice only.

• **[REVERB] in the Split Mode**
The reverb type assigned to the Right Voice will take priority over the other. (If the reverb is set to OFF, the Left Voice’s reverb type will be in affect.)
Reverb depth setting via the panel controls (i.e. pressing the [–/NO▼] or [+ / YES▲] buttons while holding the [REVERB] button — see page 20) will be applied to the Right Voice only.

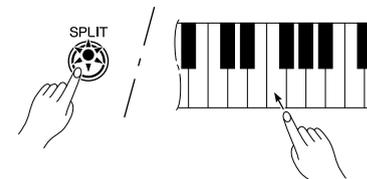
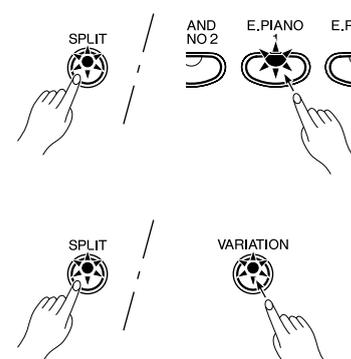
Setting the Split Point

The split point is initially set at the F#2 key by default. You can change the split point to any other key by pressing the key while holding the [SPLIT] button (the name of the current split-point key appears on the LED display while the [SPLIT] button is held). The split point can also be set via the Function mode (see below).

Other Split Mode Functions.....

The P-120/P-120S Function mode provides access to a number of other split-mode functions, listed below. See the corresponding pages for details.

- Split Point 33
- Split Balance 33
- Right Voice Octave Shift 34
- Left Voice Octave Shift 34
- Right Voice Effect Depth..... 34
- Left Voice Effect Depth..... 34
- Sustain Pedal Range..... 34
- AUX Pedal Range 34
- Reset..... 34



Example:

A-1	B ^b -1	C2	F [#] 2
A-1	B ^b -1	C2	F [#] 2

- “^b” is indicated with a lower “^b”.
- “[#]” is indicated with an upper “[#]”.



Reverb

The **[REVERB]** button selects a number of digital reverb effects that you can use for extra depth and expressive power.

To select a reverb type press the **[REVERB]** button a few times until the indicator corresponding to the desired type lights (the indicators light in sequence each time the **[REVERB]** button is pressed). No reverb is produced when all indicators are off.

OFF

No reverb effect is selected when no REVERB indicator is lit.

ROOM

This setting add a continuous reverb effect to the sound that is similar to the type of acoustic reverberation you would hear in a room.

HALL 1

For a “bigger” reverb sound, use the HALL 1 setting. This effect simulates the natural reverberation of a small-size concert hall.

HALL 2

For a really spacious reverb sound, use the HALL 2 setting. This effect simulates the natural reverberation of a large concert hall.

STAGE

A simulation of the type of reverb produced in a stage environment.

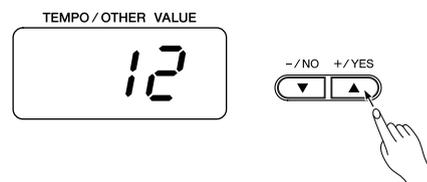
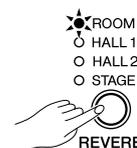
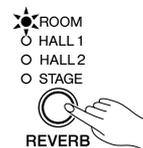


- The default reverb type (including OFF) and depth settings are different for each voice.
- Even if the REVERB effect is OFF, a “Soundboard Reverb” effect will be applied when either the GRAND PIANO 1 or 2 voice is selected.



Adjusting Reverb Depth.....

Adjust the reverb depth for the selected voice by using the **[-/NO▼]** and **[+/YES▲]** buttons while holding the **[REVERB]** button. The depth range is from 0 through 20 (the current depth setting appears on the LED display while the **[REVERB]** button is held). A setting of “0” produces no effect, while a setting of “20” produces maximum reverb depth. Press the **[-/NO▼]** and **[+/YES▲]** buttons simultaneously while holding the **[REVERB]** button to recall the default setting for the current voice (default depth settings are different for each voice).





The Effect

The [EFFECT] button allows you to select one of the effects that can give your sound greater depth and animation.

To select an effect type press the [EFFECT] button a few times until the indicator corresponding to the desired type lights (the indicators light in sequence each time the [EFFECT] button is pressed). No effect is produced when all indicators are off.

OFF

No effect is selected when no EFFECT indicator is lit.

CHORUS

Shimmering, broadening effect

PHASER

Adds a sweeping effect to the sound.

TREMOLO

Tremolo effect

DELAY

Echo effect

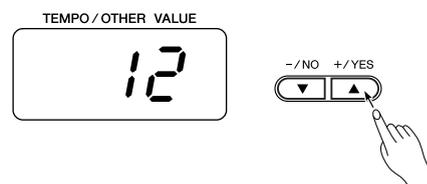
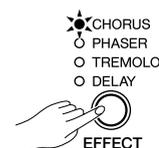
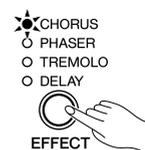


- The default effect type (including OFF) and depth settings are different for each voice.



Adjusting Effect Depth

Effect depth can be individually adjusted for the selected voice by using the [-/NO▼] and [+/YES▲] buttons while holding the [EFFECT] button. The depth range is from 0 through 20 (the current depth setting appears on the LED display while the [EFFECT] button is held). A setting of “0” produces no effect, while a setting of “20” produces maximum effect depth. Press the [-/NO▼] and [+/YES▲] buttons simultaneously while holding the [EFFECT] button to recall the default setting for the current voice (the default depth settings are different for each voice).





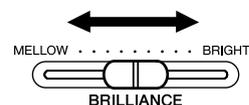
Brilliance

This control can be used to change the tonality or “timbre” of the sound output. The control range is from MELLOW to BRIGHT.

For a brighter or “sharper” tone, slide the control towards the BRIGHT position. For a “rounder” more mellow tone, slide the control towards the MELLOW position.



- When the BRILLIANCE is set to BRIGHT, the overall sound will be slightly louder. If the MASTER VOLUME is set at a high level the sound may become distorted. If so, lower the MASTER VOLUME level.



Transposition

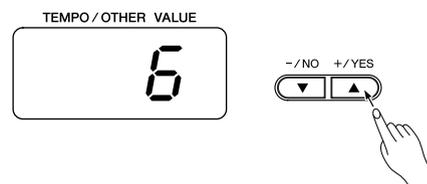
The P-120/P-120S’s TRANSPOSE function makes it possible to shift the pitch of the entire keyboard up or down in semitone intervals up to a maximum of 12 semitones (i.e. a maximum of one octave up or down). “Transposing” the pitch of the P-120/P-120S keyboard facilitates playing in difficult key signatures, and you can easily match the pitch of the keyboard to the range of a singer or other instrumentalist.

Use the [-/NO▼] and [+ /YES▲] button while holding the [TRANSPOSE] button to transpose down or up as required. The transposition range is from “-12” (down one octave) through “0” (normal pitch) to “12” (up one octave). The amount of transposition appears on the LED display while the [TRANSPOSE] button is held. The default transpose setting is “0”.

The [TRANSPOSE] button indicator remains lit when a transpose setting other than “0” is selected. Every time the [TRANSPOSE] button is pressed after that switches the transpose ON/OFF.



- Notes below and above the A-1 ... C7 range of the P-120/P-120S sound one octave higher and lower, respectively.





Touch Sensitivity

Four different types of keyboard touch sensitivity — HARD, MEDIUM, SOFT or FIXED — can be selected to match different playing styles and preferences.

To select a touch sensitivity type press the [TOUCH] button a few times until the indicator corresponding to the desired type lights (the indicators light in sequence each time the [TOUCH] button is pressed).

HARD

The HARD setting requires the keys to be played quite hard to produce maximum loudness.

MEDIUM

The MEDIUM setting produces a fairly “standard” keyboard response. This is the initial factory default setting.

SOFT

The SOFT setting allows maximum loudness to be produced with relatively light key pressure.

FIXED (no indicator lit)

All notes are produced at the same volume no matter how hard the keyboard is played.

When the FIXED type is selected, the volume of notes played in the FIXED mode can be set by using the [–/NO▼] and [+ /YES▲] buttons while the [TOUCH] button is held (the current volume level appears on the display). The volume range is from 1 through 127. The default setting is 64.



- This setting does not change the weight of the keyboard.
- The touch sensitivity type and volume set in the FIXED mode will become the common setting for all voices. However, the touch sensitivity settings may have little or no effect with certain voices which are not normally responsive to keyboard dynamics (Refer to the “Voice Descriptions” on page 45).





Tuning

Tuning makes it possible to adjust the pitch of the P-120/P-120S over a 427.0 Hz ... 453.0 Hz (corresponding to the A3 note's Hz) range in approximately 0.2 Hertz intervals. Pitch control is useful for tuning the P-120/P-120S to match other instruments or recorded music.

Tuning Up

- 1 To tune up (raise pitch), hold the A-1 and B-1 keys simultaneously.
- 2 Press any key between C3 and B3. Each time a key in this range is pressed the pitch is increased by approximately 0.2 Hz. The [-/NO▼] and [+ /YES▲] buttons can also be used to tune down or up, respectively, in approximately 1 Hz increments. Press the [-/NO▼] and [+ /YES▲] buttons simultaneously to recall standard tuning (A3 = 440 Hz).
- 3 Release the A-1 and B-1 keys.

Tuning Down

- 1 To tune down (lower pitch), hold the A-1 and A#-1 keys simultaneously.
- 2 Press any key between C3 and B3. Each time a key in this range is pressed the pitch is decreased by approximately 0.2 Hz. The [-/NO▼] and [+ /YES▲] buttons can also be used to tune down or up, respectively, in approximately 1 Hz increments. Press the [-/NO▼] and [+ /YES▲] buttons simultaneously to recall standard tuning (A3 = 440 Hz).
- 3 Release the A-1 and A#-1 keys.

To Restore Standard Pitch

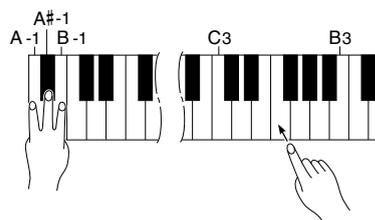
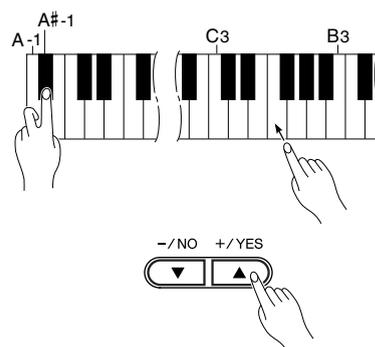
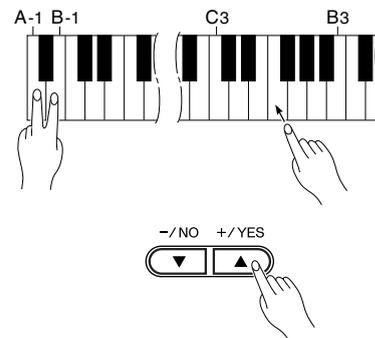
- 1 To restore the default pitch (A3 = 440 Hz), hold the A-1, A#-1 and B-1 keys simultaneously.
- 2 Press any key between C3 and B3. (Pressing once will restore the keyboard to standard pitch, regardless of the amount of pitch adjustment.)
- 3 Release the A-1, A#-1 and B-1 keys.

In terms of “Hertz”, the overall tuning range is from 427.0 Hz to 453.0 Hz. The current tuning setting is shown on the LED display while the tuning is being adjusted. Tenths of a Hertz are indicated on the LED display by the appearance and position of one or two dots, as in the following example:

Display	Value
440	440.0
440.	440.2
440.	440.4
440.	440.6
440.	440.8



• An alternative tuning method is available in the Function mode — page 31.





The Metronome & Tempo Control

The P-120/P-120S built-in metronome is a convenient feature for practice, and it can also provide a solid rhythmic guide when recording with the User Song Recorder feature, described in the next section.

The Metronome

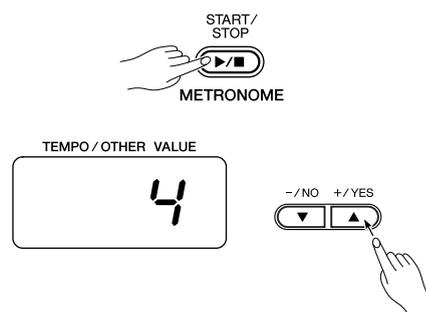
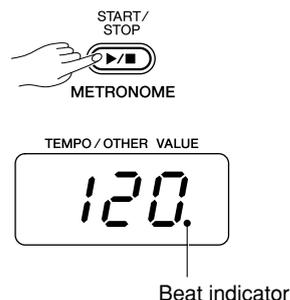
The metronome sound is alternately turned on and off by pressing the **METRONOME [START/STOP]** button. When on, the beat indicator flashes at the current tempo.

Metronome Time Signature.....

The time signature (beat) of the metronome can be set by using the **[-/NO▼]** and **[+/YES▲]** buttons while holding the **METRONOME [START/STOP]** button. You can set the beat to 0, 2, 3, 4, 5 or 6 (the current setting appears on the LED display while the **METRONOME [START/STOP]** button is held). Press the **[-/NO▼]** and **[+/YES▲]** buttons simultaneously while holding the **METRONOME [START/STOP]** button to recall the default setting “0” (no accent).

Metronome Volume Function.....

The volume of the metronome sound can be adjusted via the Metronome Volume function in the Function mode—page 36.

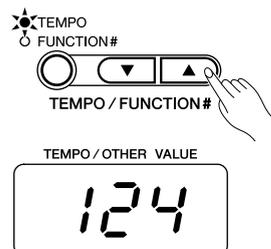


Tempo Control

The tempo of the metronome and user song recorder playback (the recorder is described in the next section) can be set from 32 to 280 beats per minute by using the **[TEMPO/FUNCTION# ▼, ▲]** buttons (when the **[TEMPO/FUNCTION#]** button’s **[TEMPO]** indicator is lit). The selected tempo will appear on the LED display while in the normal play mode and while the **[TEMPO/FUNCTION# ▼, ▲]** buttons are being used to adjust the tempo in the recording/playback mode. The default tempo (120 or the recorded song tempo when the recorder contains data and the playback track indicator is lit) can be recalled by simultaneously pressing the **▼** and **▲** buttons.



• If the **[TEMPO/FUNCTION#]** button’s **[FUNCTION#]** indicator is lit, press the **[TEMPO/FUNCTION#]** button to light the **[TEMPO]** indicator.





Using the User Song Recorder

The ability to record and play back what you've played on the P-120/P-120S keyboard can be an effective practice aid. You can, for example, record just the left-hand part, and then practice the right-hand part while playing back the recorded left-hand part. Or, since you can record up to two tracks separately, you could record the left- and right-hand parts separately, or record both parts of a duet and hear how they sound when played back. The P-120/P-120S's two-track Song Recorder allows the recording of three User Songs.

The user song recorder actually records the following data:

■ Entire Song

- Tempo
- Time signature (beat)
- Reverb type (including OFF)
- Effect type (including OFF)

■ Individual Tracks

- Notes played
- Dual mode voices
- Pedal Operation (sustain, soft, sostenuto, expression)
- Reverb depth
- Dual octave shift (F3)
- Voice selection
- Split mode voices
- Effect depth
- Dual balance (F3)
- Split balance (F4)
- Voice variation
- Dual detune (F3)
- Split octave shift (F4)

Recording

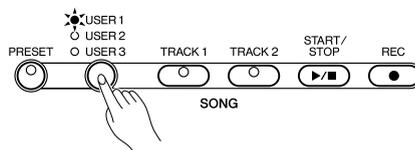
1 Select a Song For Recording.....

Press the [USER 1/2/3] button to select a song for recording. The indicator of the selected song will light. (A song is not selected if none of the indicators are lit.)



NOTE

- When in the demo song mode, the [USER 1/2/3] button can not be used to select a song.



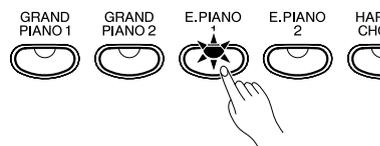
2 Make All Necessary Initial Settings

Before actually beginning to record, select the voice you want to record with (or voices if you will be using the dual or split mode). You might also want to set the volume and tempo controls.



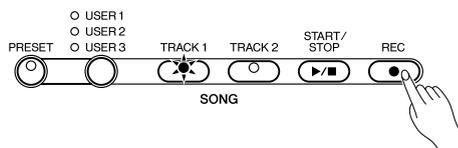
NOTE

- If you want to change the tempo, time signature, reverb type, or effect type when re-recording a track or when recording to another track, do so after entering the record ready mode (step 3).



3 Engage the Record Ready Mode.....

Press the [REC] button to engage the record ready mode (recording does not actually start yet). The record ready mode can be disengaged before recording by pressing the [REC] button a second time.

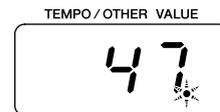
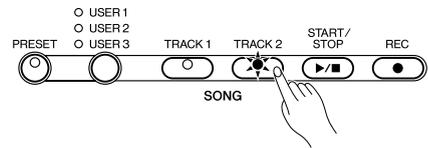


4 Select the Record Track

When the record mode is engaged in the previous step, the last-recorded track will automatically be selected for recording and its indicator — i.e. the [TRACK 1] or [TRACK 2] button indicator — will glow red. If you want to record on a different track, press the appropriate track button so that its indicator glows red.

NOTE

- The indicator of a track containing previously recorded data will glow green (unless the track is turned off as described below). When recording, the previously recorded data on the track not being recorded will be played back so you can play along with the previously recorded track. If you don't want to hear the previously recorded track as you record (when you want to record a song different from what you recorded on the previous track etc.), press the playback track button before pressing the [REC] button (step 2, above) so that its indicator goes out.
- If a user song ([USER 1/2/3]) is not selected (the lamp is not lit), pressing the [REC] button will result in the [USER 1] song's [TRACK 1] being selected and the record ready mode engaged. At this time, [TRACK 2] playback will be turned off if the track contains data.
- Recording on a track which already contains data (the indicator glows green) will erase all previous data on that track.
- When the record mode is engaged the amount of memory available for recording will be shown on the LED display in approximate kilobytes (starting at "47"), and the rightmost dot on the LED display will flash at the current METRONOME tempo setting.

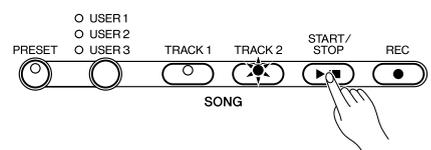


5 Start Recording

Recording will begin automatically as soon as you play a note on the keyboard or press the SONG [START/STOP] button. The current measure number will appear on the display while recording.

NOTE

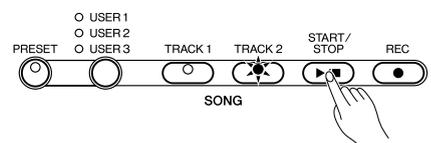
- The AUX pedal can be assigned to start and stop recording via the "AUX PEDAL Mode" function described on page 35.
- If the metronome was on when you started recording, you'll be able to keep time with the metronome while recording, but the metronome sound will not be recorded.
- You can record up to a maximum of about 10,000 notes on the P-120/P-120S depending on pedal usage and other factors. The record track indicator will begin to flash when recorder memory is almost full. If the memory becomes full during recording, "FULL" will appear on the display and recording will stop automatically. (All recorded data up to that point will be retained.)



6 Stop Recording

Press either the [REC] or SONG [START/STOP] button to stop recording.

The indicator of the recorded track will glow green to indicate that it now contains data.



Using the User Song Recorder

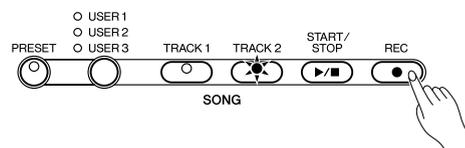
Changing the Initial Settings

The initial voice, tempo, time signature, reverb type, reverb depth, effect type and effect depth settings made in step 2 of the recording procedure are actually recorded by the P-120/P-120S.

These initial settings can be changed after the recording is finished by pressing the [REC] button to engage the record ready mode, pressing the appropriate track button, making the required changes, and then pressing the [REC] button again to exit from the record ready mode and register the changes.

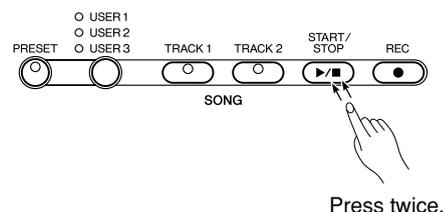
If you do this, be careful not to press the **SONG [START/STOP]** button or a key on the keyboard, either of which will start recording and erase all previous recorded data on the selected track.

It is possible to cancel the operation even after changes have been made: change tracks and then press the [REC] button to exit from the record mode.



Erasing a Single Track

All data can be erased from either of the recorder's tracks by engaging the record mode, selecting the track you want to erase, and then pressing the **SONG [START/STOP]** button twice without recording any data.

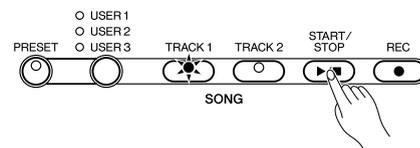


Playback

To playback what you've recorded, first make sure that the song you want to playback is selected by pressing the [USER 1/2/3] button to select the song for playback. The selected song indicator will light. (A song is not selected if none of the indicators are lit.) Next, make sure that the green track indicators of the tracks you want to play are lit. If not, press the corresponding track button(s) so that they are lit. Then press the **SONG [START/STOP]** button. Playback starts from the beginning of the recorded data, and will stop automatically at the end of the recorded data. You can also stop playback at any time by pressing the **SONG [START/STOP]** button.

To mute a track so that it doesn't play back, press the corresponding track button so that its indicator goes out (press again to turn the track back on).

The current measure number appears on the display during playback.



NOTE

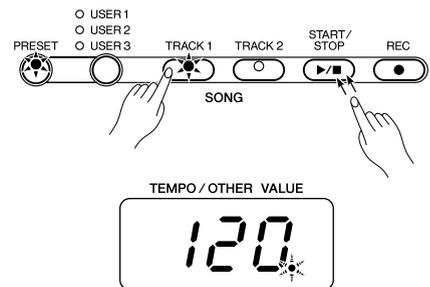
- When in the demo song mode, the [USER 1/2/3] button can not be used to select a song.
- It is possible to play along on the keyboard during playback. In this case, the playback voice and the voice you play on the keyboard are not the same. The playback voice is the voice that was set when the data was recorded. The voice you play on the keyboard is the voice that is selected on the panel.
- The playback volume and tempo can be adjusted by using the [MASTER VOLUME] control and [TEMPO/FUNCTION# ▼,▲] buttons (press both [TEMPO/FUNCTION# ▼,▲] buttons simultaneously to recall the default tempo).
- All user song recorder data will be retained in memory for about one week after the power is turned off. If you want to keep your recorded data for longer periods, turn the power on for a few minutes at least once a week. It is also possible to store it to an external MIDI storage device such as the Yamaha MIDI Data Filer MDF3 by using the Bulk Data Dump function described on page 39.
- If the metronome is being used during playback, the metronome will automatically stop when playback is stopped.
- During recorder playback, the volume of a track which is turned off will always be "0" (i.e. the "Preset Song Part Cancel Volume" function — page 36 — only affects preset song playback).
- The playback data is not transmitted via the MIDI OUT connector.
- Playback cannot be started when the recorder contains no data, or when both track buttons are off.
- If the REVERB type is changed via the panel controls during playback, both the playback and keyboard reverb effects will be changed.
- If the EFFECT type is changed via the panel controls during playback, the playback effect may be switched off in some cases.

Synchro Start

When the Synchro Start function is engaged, recorder playback will begin automatically as soon as you start playing on the keyboard.

To engage the Synchro Start function press the **SONG** [START/STOP] button while holding a track button which is ON. The rightmost dot on the display will flash at the current tempo. (Repeat the previous operation to disengage the Synchro Start function.) Playback will then start as soon as you begin playing on the keyboard.

If you hold a track button which is OFF while pressing the **SONG** [START/STOP] button, that track will be turned ON and the Synchro Start mode will be engaged.



AUX PEDAL Start/Stop

The AUX PEDAL can be assigned to start and stop recorder playback via the "AUX PEDAL Mode" function described on page 35. This is convenient for starting playback of the recorded part anytime after you have started playing.



The Function Mode

The [TEMPO/FUNCTION#] button provides access to a range of functions that give the P-120/P-120S extraordinary versatility. The functions are categorized in groups as follows:

F1 Tuning	31
F2 Scale	31
F3 Dual Mode Functions	32
F4 Split Mode Functions	33
F5 Pedal Functions	35
F6 Metronome Volume	36
F7 Preset Song Part Cancel Volume	36
F8 MIDI Functions	37
F9 Backup Functions	40

To Select a Function.....

1 Press the [TEMPO/FUNCTION#] button so that its [FUNCTION#] indicator lights.

NOTE • Functions cannot be selected during demo/preset song mode or when the user song recorder is in operation.

2 Use the [TEMPO/FUNCTION# ▼, ▲] buttons to select the desired function from F1 through F9.

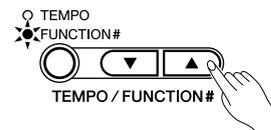
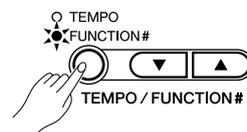
3 In the case of the Scale (F2), Dual Mode (F3), Split Mode (F4), Pedal Functions (F5), MIDI (F8), and Backup (F9) functions, you will have to press the [+ / YES ▲] button once to enter the respective sub-mode after the function has been selected, and then use the [TEMPO/FUNCTION# ▼, ▲] buttons again to select the desired sub-function.

NOTE • The Dual or Split mode must be engaged before the F3 and F4 functions can be selected, respectively. If the corresponding mode is not engaged, "F3-" or "F4-" will appear on the display and the corresponding sub-mode will not be available.
• The Dual mode can be engaged while in the Function mode, but the Function mode must be exited before the Split mode can be engaged.

4 Set the function as required by using the [- / NO ▼] and [+ / YES ▲] buttons (see the individual function descriptions, below).

NOTE • After selecting the function, the current setting will be displayed when the [- / NO ▼] or [+ / YES ▲] button is pressed for the first time.

5 Press the [TEMPO/FUNCTION#] button so that its [TEMPO] indicator lights to exit from the function mode.



● Operation Example

F3.4

↓ Press [+ / YES ▲]

F3.1 ... F3.7 (sub-mode)

↓ Use [TEMPO/FUNCTION# ▼, ▲]

F3.2

↓ Press [- / NO ▼] or [+ / YES ▲] once

- 10 ... 0 ... 10

↓ Use [- / NO ▼], [+ / YES ▲]

5

F1 Tuning

In addition to the tuning method described on page 24, overall tuning can also be accomplished via the F1 function.

After selecting “F 1”, use the [–/NO▼] and [+ /YES▲] buttons to lower or raise the pitch in approximately 0.2 Hz increments (the first time the [–/NO▼] or [+ /YES▲] button is pressed simply switches to the tuning value display without actually changing the tuning). The overall tuning range is from 427.0 Hz to 453.0 Hz (corresponding to the A3 note’s Hz). Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default value “440.0 Hz”.

Tenths of a Hertz are indicated on the LED display by the appearance and position of one or two dots, as in the following example:

Display	Value
440	440.0
440.	440.2
440.	440.4
440.	440.6
440.	440.8

F2 Scale

After selecting “F 2”, press the [+ /YES▲] button to engage the scale function sub-mode, then use the [TEMPO/FUNCTION# ▼, ▲] buttons to select the desired scale function, as listed below.

F2.1: Scale.....

In addition to the standard Equal Temperament tuning, the P-120/P-120S includes 6 classic tunings that you can select and use to play music of the corresponding period, or experiment with in a more modern context. The tunings are:

- | | |
|----------------------|-----------------|
| 1: Equal Temperament | 5: Mean Tone |
| 2: Pure Major | 6: Werckmeister |
| 3: Pure Minor | 7: Kirnberger |
| 4: Pythagorean | |

Use the [–/NO▼] and [+ /YES▲] buttons to select the number of the desired tuning.

Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default settings (Equal Temperament tuning).

F2.2: Base Note

Unlike Equal Temperament tuning, these classic tunings must be tuned to a specific key. Use the [–/NO▼] and [+ /YES▲] buttons to select the key you want the previously selected tuning to be based. The selected key will appear on the display, followed by a low bar if flat (e.g. “F_b”) or a high bar if sharp (e.g. “F_#”).

Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default settings “C”.



NOTE • The base note setting is effective for tunings other than the Equal Temperament tuning.

F3 Dual Mode Functions

After selecting “F 3.5”, press the [+ / YES ▲] button to engage the dual-mode function sub-mode, then use the [TEMPO / FUNCTION# ▼, ▲] buttons to select the desired dual mode function, as listed below.

If the Dual mode is not engaged “F 3.-” will appear instead of “F 3.5” and the Dual mode functions cannot be selected. If this happens engage the Dual mode and proceed.

■ **SHORTCUT:** You can jump directly to the dual-mode functions (F3) by pressing the [TEMPO / FUNCTION#] button while holding the two dual-mode voice selectors.

 **NOTE** • Dual mode function settings are set individually for each voice combination.

F3.1: Dual Balance

The volume levels of the two voices combined in the dual mode can be adjusted as required by using this function. Use the [- / NO ▼] and [+ / YES ▲] buttons to adjust the balance as required. The balance range is from 0 through 20. A setting of “10” produces equal balance between the two dual-mode voices. Settings below “10” increase the volume of the 2nd Voice in relation to the 1st Voice, and settings above “10” increase the volume of the 1st Voice in relation to the 2nd Voice (“1st” and “2nd” is explained on page 18). Press the [- / NO ▼] and [+ / YES ▲] buttons simultaneously to recall the default setting (different for each voice combination).

You can set one voice as the main voice, and another voice as a softer, mixed voice.

F3.2: Dual Detune

This function makes it possible to detune the 1st and 2nd dual-mode Voices to create a thicker sound. Use the [- / NO ▼] and [+ / YES ▲] buttons to set the amount of detuning as required. The detune range is from -10 through 10. A setting of “0” sets both voices to the same pitch. Settings below “0” increase the pitch of the 2nd Voice in relation to the 1st Voice, and settings above “0” increase the pitch of the 1st Voice in relation to the 2nd Voice (“1st” and “2nd” is explained on page 18). Press the [- / NO ▼] and [+ / YES ▲] buttons simultaneously to recall the default setting (different for each voice combination).

F3.3: 1st Voice Octave Shift

F3.4: 2nd Voice Octave Shift

Depending on which voices you combine using the dual mode, the combination may sound better if one of the voices is shifted up or down an octave. Use the [- / NO ▼] and [+ / YES ▲] buttons to set the octave of the 1st or 2nd Voice as required (“1st” and “2nd” is explained on page 18). The available settings are “0” for normal pitch, “-1” to shift the pitch down one octave, and “1” to shift the pitch up one octave. Press the [- / NO ▼] and [+ / YES ▲] buttons simultaneously to recall the default setting (different for each voice combination).

F3.5: 1st Voice Effect Depth.....

F3.6: 2nd Voice Effect Depth

These functions make it possible to individually set the depth of the effect for the 1st and 2nd dual-mode Voices (“1st” and “2nd” is explained on page 18). Use the [–/NO▼] and [+ /YES▲] buttons to set the effect depth for the corresponding voice as required. The depth range is from 0 through 20. A setting of “0” produces no effect, while a setting of “20” produces maximum effect depth. Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting (different for each voice combination).

 **NOTE** • The effect depth settings cannot be changed unless the EFFECT is ON. The Function mode must be exited before EFFECT can be turned ON.

F3.7: Reset

This function resets all dual-mode functions to their default values. Press the [+ /YES▲] button to reset the values. “ErD” will appear on the display when all functions have been reset.

F4 Split Mode Functions

After selecting “F 4.5”, press the [+ /YES▲] button to engage the split-mode function sub-mode, then use the [TEMPO/FUNCTION# ▼, ▲] buttons to select the desired split mode function, as listed below.

If the Split mode is not engaged “F 4.-” will appear instead of “F 4.5” and the Split mode functions cannot be selected. Also note that you must exit from the Function mode before the Split mode can be engaged.

■ **SHORTCUT:** You can jump directly to the split-mode functions (F4) by pressing the [TEMPO/FUNCTION#] button while holding the [SPLIT] button.

F4.1: Split Point

In addition to the split point setting method described on page 19, the split point can be set via this function. Use the [–/NO▼] and [+ /YES▲] buttons to set the split point as required, or simply press the appropriate key on the keyboard: from “R - 1” to “L 7”. Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting “F#2”.

F4.2: Split Balance

The volume levels of the two voices combined in the split mode can be adjusted as required by using this function. Use the [–/NO▼] and [+ /YES▲] buttons to adjust the balance as required. The balance range is from 0 through 20. A setting of “10” produces equal balance between the two split-mode voices. Settings below “10” increase the volume of the Left Voice in relation to the Right Voice, and settings above “10” increase the volume of the Right Voice in relation to the Left Voice. Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting (different for each voice combination).

 **NOTE** • The split balance setting is set individually for each voice combination.

F4.3: Right Voice Octave Shift.....

F4.4: Left Voice Octave Shift

Depending on which voices you combine using the split mode, the combination may sound better if one of the voices is shifted up or down an octave. Use the **[-/NO▼]** and **[+/YES▲]** buttons to set the octave of the Left or Right Voice as required. The available settings are “0” for normal pitch, “-1” to shift the pitch down one octave, and “1” to shift the pitch up one octave. Press the **[-/NO▼]** and **[+/YES▲]** buttons simultaneously to recall the default setting (different for each voice combination).

Set according to the pitch extent for the song you want to play.

 **NOTE** • The octave shift settings are set individually for each voice combination.

F4.5: Right Voice Effect Depth.....

F4.6: Left Voice Effect Depth

These functions make it possible to individually set the depth of the effect for the Left and Right split-mode Voices. Use the **[-/NO▼]** and **[+/YES▲]** buttons to set the effect depth for the corresponding voice as required. The depth range is from 0 through 20. A setting of “0” produces no effect, while a setting of “20” produces maximum effect depth. Press the **[-/NO▼]** and **[+/YES▲]** buttons simultaneously to recall the default setting (different for each voice combination).

 **NOTE** • The effect depth settings cannot be changed unless the **EFFECT** is ON. The Function mode must be exited before **EFFECT** can be turned ON.
• The effect depth settings are set individually for each voice combination.

F4.7: Sustain Pedal Range

The Sustain Pedal Range function determines whether the sustain pedal affects the Right Voice, the Left Voice, or both the Left and Right Voices in the split mode. Use the **[-/NO▼]** and **[+/YES▲]** buttons to select “2” for the Left Voice, “1” for the Right Voice, or “ALL” for both voices. Press the **[-/NO▼]** and **[+/YES▲]** buttons simultaneously to recall the default setting “ALL”.

F4.8: AUX Pedal Range

The AUX Pedal Range function determines whether the AUX pedal affects the Right Voice, the Left Voice, or both the Left and Right Voices in the split mode. Use the **[-/NO▼]** and **[+/YES▲]** buttons to select “2” for the Left Voice, “1” for the Right Voice, or “ALL” for both voices. Press the **[-/NO▼]** and **[+/YES▲]** buttons simultaneously to recall the default setting “ALL”.

 **NOTE** • When sustain is assigned to the **AUX PEDAL** function (F5.1), the setting in this section will be ignored and the setting in section F4.7 will be in affect.

F4.9: Reset

This function resets all split-mode functions to their default values. Press the **[+/YES▲]** button to reset the values. “*End*” will appear on the display when all functions have been reset.

F5 Pedal Functions

After selecting “F 5.5”, press the [+ / YES ▲] button to engage the pedal functions sub mode, then use the [TEMPO / FUNCTION# ▼, ▲] buttons to select the desired pedal functions, as listed below.

F5.1: AUX PEDAL Mode

This function conveniently lets you set operation of the AUX PEDAL to one of the modes listed below. Use the [- / NO ▼] and [+ / YES ▲] buttons to select the desired AUX PEDAL mode. Press the [- / NO ▼] and [+ / YES ▲] buttons simultaneously to recall the default setting of “1”.

1. Soft Pedal

The soft pedal reduces the volume and slightly changes the timbre of notes played while the pedal is pressed. The soft pedal will not affect notes which are already playing when it is pressed.

2. Sostenuto Pedal

If you play a note or chord on the keyboard and press the pedal while the note(s) are held, those notes will be sustained for as long as the pedal is held (as if the sustain pedal had been pressed) but all notes played thereafter will not be sustained. This makes it possible to sustain a chord, for example, while other notes are played “staccato.”



- Organ, string and choir voices will continue to sound for as long as the sostenuto pedal is depressed.

3. Expression

This mode allows control of dynamics during performance.

4. Sustain Pedal (ON/OFF)

The sustain pedal functions in the same way as the damper pedal on an acoustic piano. In this case the AUX PEDAL operates as an ON/OFF switch so when the pedal is pressed, notes played have a long sustain. Releasing the pedal immediately stops (dampens) any sustained notes.

5. Sustain Pedal (Continuous)

The sustain pedal functions in the same basic way as the damper pedal on an acoustic piano however, in this case the pedal operates as continuous controller so the further down the pedal is pressed, the longer notes will sustain (can be used like a half pedal effect).

6. Variation

This mode allows switching of the Voice's variation on or off. In this mode, the AUX PEDAL functions in the same manner as the [VARIATION] button on the panel.

7. Song Start/Stop

This mode allows starting/stopping of song playback. In this mode, the AUX PEDAL functions in the same manner as the SONG [START/STOP] button on the panel.



- We recommend that an optional foot controller FC7 be used with mode 3 (Expression). In mode 5 (Sustain Pedal [Continuous]), we recommend that the supplied pedal be used. For all other modes, we recommend either the supplied pedal or the optional FC4 foot switch be used.

F5.2: Sustain Sample Depth

The GRAND PIANO 1 and 2 voices feature special “Sustain Samples” that recreate the unique resonance produced by an acoustic grand piano’s soundboard and strings when its damper pedal is pressed. The effect is can be controlled with the P-120/P-120S’s sustain pedal or the AUX PEDAL to which the sustain function has been assigned. This function lets you adjust the depth of this effect. The effect depth range is from 0 through 20. A setting of “0” produces no effect, while a setting of “20” produces maximum effect depth. Press the [- / NO ▼] and [+ / YES ▲] buttons simultaneously to recall the default setting of “12”.

The Function Mode

F5.3: Soft Pedal Effect Depth

This function sets the depth of the soft pedal effect. The effect depth range is from 1 to 5. A setting of “1” produces minimum effect depth while a setting of “5” produces maximum effect depth. Press the [-/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting of “3”.

F5.4: SUSTAIN PEDAL Type.....

F5.5: AUX PEDAL Type.....

Depending upon the pedal that is connected to the SUSTAIN PEDAL jack or AUX PEDAL jack, the effect produced by operating the pedal (ON/OFF, dynamics, etc.) might be reversed. If that is the case, use this setting to correct pedal operation. The setting range is from 1 to 2. Press the [-/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting of “1”.



NOTE

- Make sure that the power is switched OFF when connecting or disconnecting the pedal.
- If the SUSTAIN PEDAL type is set to “2”, disconnecting the sustain pedal while the power is switched on may leave the sustain active, causing notes to sustain indefinitely. In this case, switch the power “OFF” then back “ON”.

F6 **Metronome Volume**

■ **SHORTCUT:** You can jump directly to the metronome functions by pressing the [TEMPO/FUNCTION#] button while holding the METRONOME [START/STOP] button.

The volume of the metronome sound can be changed. After selecting “F6”, use the [-/NO▼] and [+ /YES▲] buttons to set the metronome volume as required. The volume range is from 1 through 20. A setting of “1” produces minimum sound, while a setting of “20” produces maximum metronome volume. Press the [-/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting “10”.

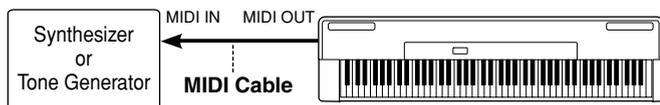
F7 **Preset Song Part Cancel Volume**

This function sets the volume at which a “canceled” part is played during preset song playback (see page 17 for information on the “preset song part cancel” function). Use the [-/NO▼] and [+ /YES▲] buttons to set the volume as required. The volume range is from 0 through 20. A setting of “0” produces no sound, while a setting of “20” produces maximum volume. Press the [-/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting “5”.

Adjust the part volume to a comfortable level to use the “canceled” part as a guide to play along with. Set to “0” if you don’t want to hear the part.

F8 MIDI Functions

● A Brief Introduction to MIDI

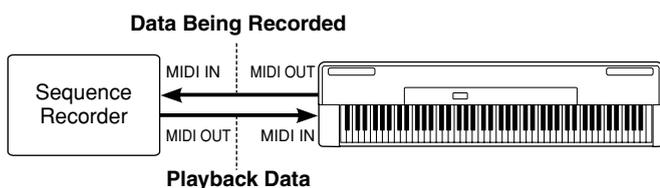


MIDI, the Musical Instrument Digital Interface, is a world-standard communication interface that allows MIDI-compatible musical instruments and equipment to share musical information and control one another. This makes it

possible to create “systems” of MIDI instruments and equipment that offer far greater versatility and control than is available with isolated instruments. For example, most MIDI keyboards (including the P-120/P-120S, of course) transmit note and velocity (touch response) information via the MIDI OUT connector whenever a note is played on the keyboard. If the MIDI OUT connector is connected to the MIDI IN connector of a second keyboard (synthesizer, etc.) or a tone generator (essentially a synthesizer with no keyboard), the second keyboard or tone generator will respond precisely to notes played on the original transmitting keyboard. The result is that you can effectively play two instruments at once, providing thick multi-instrument sounds.

This same type of musical information transfer is used for MIDI sequence recording. A sequence recorder can be used to “record” MIDI data received from a P-120/P-120S, for example. When the recorded data is played back, the P-120/P-120S automatically “plays” the recorded performance in precise detail.

The examples given above really only scratch the surface. MIDI can do much, much more. The P-120/P-120S MIDI functions allow it to be used in fairly sophisticated MIDI systems.



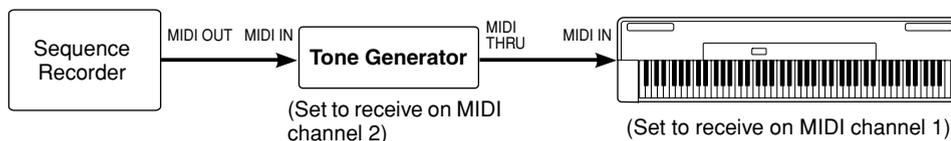
After selecting “F8.4”, press the [+ / YES ▲] button to engage the MIDI function sub-mode, then use the [TEMPO / FUNCTION# ▼, ▲] buttons to select the desired MIDI function, as listed below.



- The side-panel HOST SELECT switch must be set to “MIDI” in order to use the MIDI connectors. When you use the TO HOST connector, set the HOST SELECT switch to the appropriate position for the type of computer you are using (see page 41). In this situation, all MIDI settings described below will have affect on the MIDI signal in and out of the TO HOST connector.
- Always use a high-quality MIDI cable to connect MIDI OUT to MIDI IN terminals. Never use MIDI cables longer than about 15 meters, since cables longer than this can pick up noise which can cause data errors.

F8.1: MIDI Transmit Channel Selection

F8.2: MIDI Receive Channel Selection



The MIDI system allows transmission and reception of MIDI data on 16 different channels. Multiple channels have been implemented to allow selective control of certain instruments or devices connected in series. For example, a single MIDI sequence recorder could be used to “play” two different instruments or tone generators. One of the instruments or tone generators could be set to receive only on channel 1, while the other is set to receive on channel 2. In this situation the first instrument or tone generator will respond only to channel-1 information transmitted by the sequence recorder, while the second instrument or tone generator will respond only to channel-2 information. This allows the sequence recorder to “play” two completely different parts on the receiving instruments or tone generators.

The Function Mode

In any MIDI control setup, the MIDI channels of the transmitting and receiving equipment must be matched for proper data transfer. A “Multi-timbre” receive mode is also available, which allows simultaneous reception of different parts on all 16 MIDI channels, allowing the P-120/P-120S to play multi-channel song data received from a music computer or sequencer. There’s also a “1-2” mode which allows simultaneous reception on channels 1 and 2.

Use the [–/NO▼] and [+ /YES▲] buttons to select the desired transmit or receive channel. The transmit channel parameter can also be turned “OFF” if you don’t want the P-120/P-120S to transmit any MIDI data. To select the multi-timbre receive mode, set the receive channel to “ALL”. Select “1-2” for multi-timbre reception on channels 1 and 2 only.

Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting: transmit = “1”; receive = “ALL”.



- In the dual mode first voice data is transmitted on its set channel, and in the split mode right voice data is transmitted on its set channel. In the dual mode second voice data is transmitted on the next greater channel number of the set channel, and in the split mode left voice data is transmitted on the next greater channel number of the set channel. In either mode, no data is transmitted if the transmit channel is set to “OFF”.
- Demo/preset song data and recorder playback data are not transmitted via MIDI.
- No MIDI reception occurs when the demo/preset song mode is engaged.
- Program change and other like channel messages received will not affect the P-120/P-120S’s panel settings or what is being played on the keyboard.

F8.3: Local Control ON/OFF

“Local Control” refers to the fact that, normally, the P-120/P-120S keyboard controls its internal tone generator, allowing the internal voices to be played directly from the keyboard. This situation is “Local Control On” since the internal tone generator is controlled locally by its own keyboard.

Local control can be turned OFF, however, so that the P-120/P-120S keyboard does not play the internal voices, but the appropriate MIDI information is still transmitted via the MIDI OUT connector when notes are played on the keyboard. At the same time, the internal tone generator responds to MIDI information received via the MIDI IN connector.

Use the [–/NO▼] and [+ /YES▲] buttons to turn local control “On” or “OFF”.

Press [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting “On”.

F8.4: Program Change ON/OFF

Normally the P-120/P-120S will respond to MIDI program change numbers received from an external keyboard or other MIDI device, causing the correspondingly numbered voice to be selected on the corresponding channel (the keyboard voice does not change). The P-120/P-120S will normally also send a MIDI program change number whenever one of its voices is selected, causing the correspondingly numbered voice or program to be selected on the external MIDI device if the device is set up to receive and respond to MIDI program change numbers.

This function makes it possible to cancel program change number reception and transmission so that voices can be selected on the P-120/P-120S without affecting the external MIDI device.

Use the [–/NO▼] and [+ /YES▲] buttons to turn program change transmission and reception “On” or “OFF”.

Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting “On”.



- For information on program change numbers for each of the P-120/P-120S’s voices, refer to page 51 in the MIDI Data Format section.

F8.5: Control Change ON/OFF

Normally the P-120/P-120S will respond to MIDI control change data received from an external MIDI device or keyboard, causing the voice on the corresponding channel to be affected by pedal and other “control” settings received from the controlling device (the keyboard voice is not affected). The P-120/P-120S also transmits MIDI control change information when the pedal or other appropriate controls are operated.

This function makes it possible to cancel control change data reception and transmission so that, for example, the P-120/P-120S’s pedal and other controls can be operated without affecting an external MIDI device.

Use the [–/NO▼] and [+ /YES▲] buttons to turn control change transmission and reception “On” or “OFF”.

Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting “On”.



- For information on control changes that can be used with the P-120/P-120S, refer to the MIDI Data Format on page 50.

F8.6: MIDI Transmit Transpose

This function allows the MIDI note data transmitted by the P-120/P-120S to be transposed up or down in semitone increments by up to plus or minus 12 semitones. The pitch of the P-120/P-120S itself is not affected.

Use the [–/NO▼] and [+ /YES▲] buttons to set the desired amount of MIDI transmit transposition. The range is from “–12” (down one octave) through “0” (no transposition) to “12” (up one octave).

Press the [–/NO▼] and [+ /YES▲] buttons simultaneously to recall the default setting “0”.

F8.7: Panel/Status Transmit.....

This function causes all the current P-120/P-120S panel settings (selected voice, etc.) to be transmitted via the MIDI OUT terminal. This is particularly useful if you will be recording performances to a MIDI sequence recorder such as the Yamaha MIDI Data Filer MDF3 which will be used to control the P-120/P-120S on playback. By transmitting the P-120/P-120S panel settings and recording them on the MIDI sequence recorder prior to the actual performance data, the P-120/P-120S will be automatically restored to the same settings when the performance is played back.

Press the [+ /YES▲] button to transmit the panel/status data. “E n d” will appear on the LED display when the data has been successfully transmitted.



- See page 51 for list of the “Panel Data Contents” transmitted by this function.
- Panel setting data that is transmitted to an external device can only be reloaded on another P-120/P-120S. Panel setting data can also be directly transferred to or from another P-120/P-120S.

F8.8: Bulk Data Dump

This function is used to transmit all data stored in the User Song Recorder memory to a MIDI data storage device such as the Yamaha MIDI Data Filer MDF3, other sequence recorders, or MIDI compatible computers.

Press the [+ /YES▲] button to begin bulk transmission. “E n d” will appear on the LED display when the data has been successfully transmitted.



- User song recorder data that is transmitted to an external device can only be reloaded on another P-120/P-120S. Recorder data can also be directly transferred to or from another P-120/P-120S.
- The reload operation cannot be executed when the demo/preset song mode or user song recorder is in operation, or when the Function mode is engaged.
- No MIDI note/panel data transmission or data reception occurs during a bulk data dump transmit operation.

F9 Backup Functions

After selecting “F 9.9”, press the [+ / YES ▲] button to engage the backup function sub-mode, then use the [TEMPO / FUNCTION# ▼, ▲] buttons to select the desired backup function, as listed below.



NOTE

- The backup settings themselves, and the contents of the user song recorder memory, are always backed up.
- Even if the Backup is turned on, factory presets can be recalled at any time (see page 44). The factory setting list is found on page 49.

Even if backup is turned on via one of the functions described below, the data will only be retained in memory for about 1 week if the power is not turned on during this time. If the backup period is exceeded, all settings will be reset to their default values. If you want to retain the backup settings for longer periods, be sure to turn the power switch on for a few minutes at least once a week.



F9.1: Voice

Turns backup of the voice functions listed below on or off. Use the [- / NO ▼] and [+ / YES ▲] buttons to turn backup “On” or “OFF”.

The default backup mode is “OFF”.

- Voice (Keyboard, Dual, and Split)
- Dual (ON/OFF, Voice, and Dual Functions for each voice combination)
- Split (ON/OFF, Voice, and Split Functions for each voice combination)
- Reverb (ON/OFF, Type, and Depth for each voice)
- Effect (ON/OFF, Type, and Depth for each voice)
- Variation (for each voice)
- Touch Sensitivity (including the FIXED volume)
- Metronome (Beat, Volume)
- Preset Song Part Cancel Volume



F9.2: MIDI

Turns backup of the MIDI functions listed below on or off. Use the [- / NO ▼] and [+ / YES ▲] buttons to turn backup “On” or “OFF”.

The default backup mode is “OFF”.

- Channel (Transmit, Receive)
- Local ON/OFF
- Program Change ON/OFF
- Control Change ON/OFF
- MIDI Transmit Transpose



F9.3: Tuning

Turns backup of the tuning functions listed below on or off. Use the [- / NO ▼] and [+ / YES ▲] buttons to turn backup “On” or “OFF”.

The default backup mode is “OFF”.

- Transpose
- Tuning
- Scale (including base note)



F9.4: Pedal

Turns backup of the pedal functions listed below on or off. Use the [- / NO ▼] and [+ / YES ▲] buttons to turn backup “On” or “OFF”.

The default backup mode is “OFF”.

- AUX PEDAL Mode
- Sustain Sample Depth
- Soft Pedal Effect Depth
- SUSTAIN PEDAL Type
- AUX PEDAL Type



Connecting to a Personal Computer

Although the P-120/P-120S can be connected to a personal computer via the MIDI IN/OUT connectors and a MIDI interface, the TO HOST connector and HOST SELECT switch allow direct connection to Apple Macintosh or IBM-PC/AT personal computers for sequencing and other music applications without the need for a separate MIDI interface.

NOTE

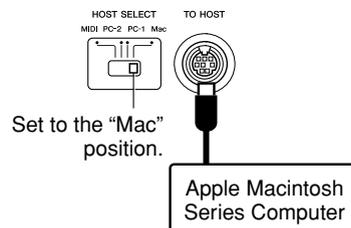
- When connecting the P-120/P-120S to a personal computer, first turn the power to both the P-120/P-120S and the computer OFF before connecting the cable and setting the HOST SELECT switch. After connecting the cable and making the appropriate HOST SELECT switch setting, turn the power to the computer on first, then turn on the P-120/P-120S.
- When not using the [TO HOST] terminal of the P-120/P-120S, make sure the cable is disconnected from the [TO HOST] terminal. If the cable is left connected, the P-120/P-120S may not function properly.
- "HSF" will appear in the display if the host computer is not turned on, the connecting cable is not properly connected, the HOST SELECT switch is not in the proper position, or the MIDI driver or MIDI application is not active. In this case, turn the power off on both the P-120/P-120S and the computer, and check the cable connection and the position of the HOST SELECT switch. Once the connection and HOST SELECT switch position is verified, turn the power of the computer on first, then the P-120/P-120S, to check if the MIDI driver and MIDI application function properly.
- When the HOST SELECT switch is set to "Mac", "PC-1", or "PC-2, no data transfer occurs via the MIDI connectors. To use



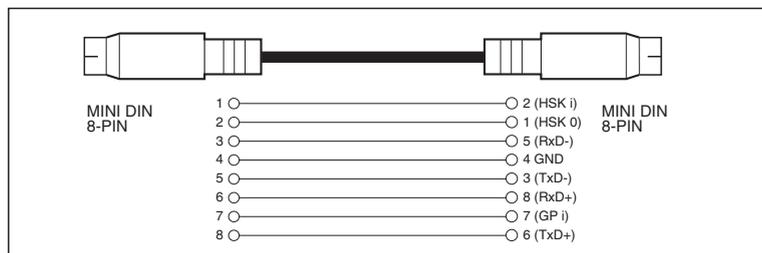
Connecting to an Apple Macintosh Series Computer.....

Connect the TO HOST connector of the P-120/P-120S to the modem or printer port on your Macintosh, depending on which port your MIDI software is using for MIDI data communication, using a standard Macintosh 8-pin system peripheral cable. Set the HOST SELECT switch to the "Mac" position.

You may also have to make other MIDI interface settings on the computer side, depending on the type of software you use (refer to your software owner's manual). In any case the clock speed should be set to 1 MHz.



● "Mac" Cable Connections



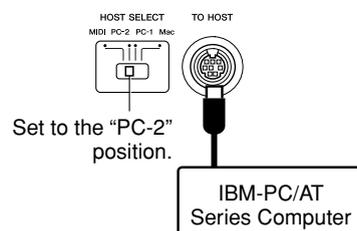
- 8-pin system peripheral cable.
- Data transfer rate: 31,250 bps.

Connecting to a Personal Computer

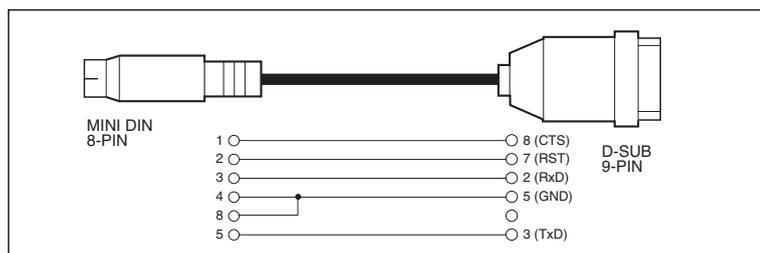
Connecting to an IBM-PC/AT Series Computer

Connect the TO HOST connector of the P-120/P-120S to the RS-232C port on your IBM computer, using a standard 8-pin MINI DIN → 9-pin D-SUB cross cable. Set the HOST SELECT switch to the “PC-2” position.

Refer to your software owner’s manual for information on any settings you might have to make on the computer side.



● “PC-2” Cable Connections



- 8-pin mini DIN → 9-pin D-SUB cable.
- Data transfer rate: 38,400 bps.

NOTE

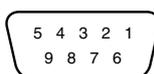
- If your system doesn't work properly with the connections and settings listed above, your software may require different settings. Check your software operation manual and if it requires a 31,250 bps. data transfer rate, set the HOST SELECT switch to “PC-1”.
- When using the TO HOST terminal to connect to a personal computer using Windows, a Yamaha MIDI driver must be installed in the personal computer. The Yamaha MIDI driver can be obtained at Yamaha's home page on the World Wide Web, <<http://www.yamaha-xg.com/>>.

● Connector Pin Numbers

MINI DIN 8-PIN



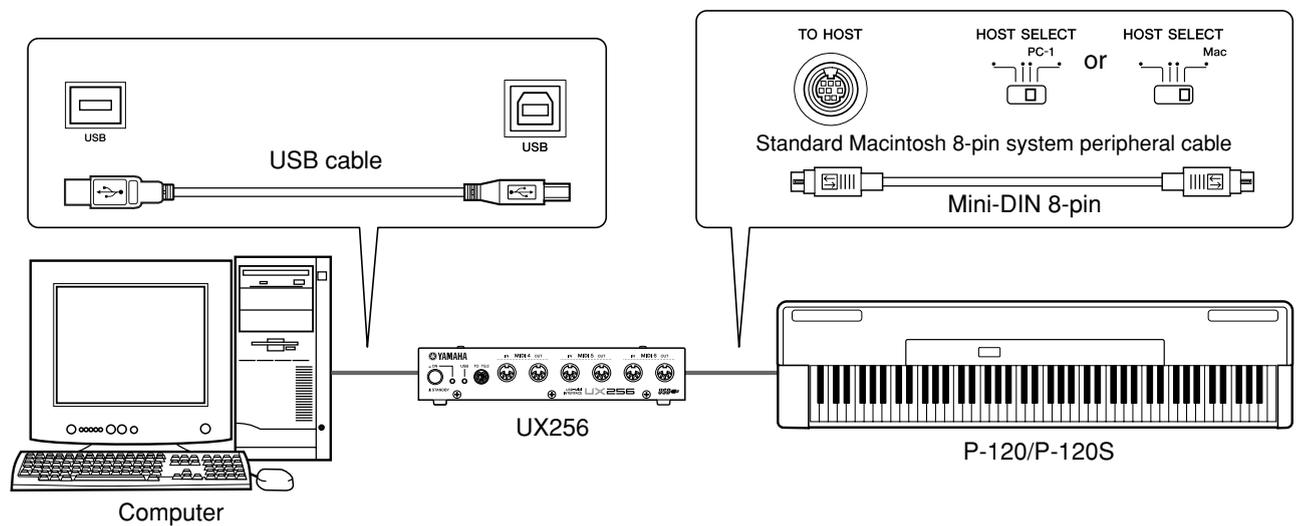
D-SUB 9-PIN



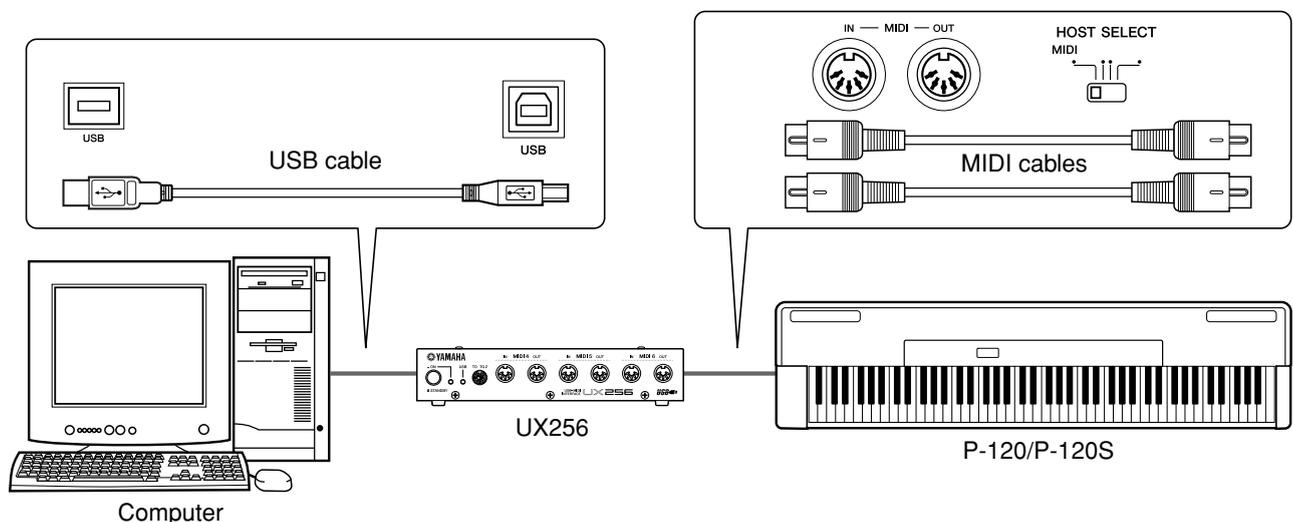
Using a USB Interface (such as the Yamaha UX256, UX96)

Connect the USB interface (Yamaha UX256, UX96 or equivalent) to your computer using a USB cable. Install the driver software supplied with the interface (or other appropriate driver software) on your computer according to the supplied instructions. Connect your instrument to the USB interface using either a standard Macintosh 8-pin system peripheral cable or MIDI cables. Refer to the manual supplied with your USB interface for details.

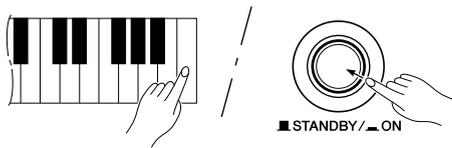
● Connecting the USB Interface and Instrument via a Serial Cable



● Connecting the USB Interface and Instrument via MIDI Cables



Factory Preset Recall



All dual mode, split mode, reverb, effect, touch sensitivity, tuning settings, and the settings affected by the Backup Functions can be restored to their original factory preset values by holding the C7 key (rightmost key on the keyboard) while turning the [STANDBY/ON] switch ON. This also erases all user song recorder data, and sets all Backup on/off settings (F9) to “OFF”.



• The factory setting list is found on page 49.

Troubleshooting

If you encounter what appears to be a malfunction, please check the following points before assuming that your P-120/P-120S is faulty.

1. No Power

Is the AC adaptor’s DC plug connected to the main unit?

Is the AC cable plugged into the AC adaptor and an AC wall outlet?

Please check all connections. (page 10)

2. No Sound or Sound Output is Low

Is the MASTER VOLUME control turned up to a reasonable listening level?

Make sure a pair of headphones is not connected to the headphones jack (when the SPEAKER switch is set to the “NORMAL” position). If the SPEAKER switch is set to the “OFF” position set it to “NORMAL” or “ON” (page 11).

Also make sure that the Local Control (page 38) is ON.

3. The speakers do not switch off when a pair of headphones is connected.

The SPEAKER switch may be switched “ON”. Set the SPEAKER switch to the “NORMAL” position (page 11).

4. The P-120/P-120S Reproduces Radio or TV Sound

This can occur if there is a high-power transmitter in your vicinity. Contact your Yamaha dealer.

5. Intermittent Static Noise

This is usually due to turning ON or OFF a household appliance or other electronic equipment which is fed by the same AC mains line as your P-120/P-120S.

6. Interference Appears On Radio or TV Sets Located Near the P-120/P-120S

The P-120/P-120S contains digital circuitry which can generate radio-frequency noise. The solution is to move the P-120/P-120S further away from the affected equipment, or vice versa.

7. Distorted Sound When the P-120/P-120S is Connected to An External Amplifier/ Speaker System.

If the P-120/P-120S is connected to a stereo system or instrument amplifier and the sound is distorted, reduce the P-120/P-120S’s [MASTER VOLUME], and/or the volume of the external equipment to a level at which the distortion ceases.

8. Noise is heard from the speakers or headphones.

The noise may be due to interference caused by the use of a mobile phone in close proximity to the P-120/P-120S.

Turn off the mobile phone, or use it further away from the P-120/P-120S.

● If “5c n” appears on the display an internal malfunction has occurred. In this case, contact your Yamaha dealer.

Voice Descriptions / Beschreibung der Stimmen / Descriptions des voix / Descripciones de las voces

Voice Name	Stereo Sampling	Touch Response	Dynamic Sampling*1	Key-off Sampling*2	Voice Descriptions
GRAND PIANO 1	○	○	○	○	Newly-recorded samples from a full concert grand piano. Also includes three levels of dynamic sampling, sustain samples, and key-off samples for exceptionally realistic acoustic grand piano sound. Perfect for classical compositions as well as any other style that requires acoustic piano.
					Neu aufgezeichnete Samples eines echten Konzertflügels. Mit dreistufigem "Dynamic Sampling", "Sustain Samples" und "Key-off Samples" für einen außergewöhnlich realistischen Konzertflügelklang. Perfekt für klassische Kompositionen sowie jede andere Musikrichtung, für die ein akustischer Klavierklang wichtig ist.
					Échantillons nouvellement enregistrés à partir d'un vrai piano à queue de concert. Comprend également des échantillons dynamiques, des échantillons de sustain et des échantillons touches silencieuses destinés à produire une sonorité acoustique réaliste d'un vrai piano à queue de concert. Convient parfaitement pour les compositions classiques comme pour tout autre style nécessitant la sonorité d'un piano acoustique.
					Muestras nuevas grabadas en un piano de cola para conciertos. Incluyen también tres niveles de muestras dinámicas, muestras de sostenido, y muestras de soltado de cuerdas para ofrecer un sonido de piano de cola acústico muy realista. Son perfectas para composiciones clásicas así como para otros estilos que requieren piano acústico.
VARIATION	○	○	○	○	A brighter sounding piano than GRAND PIANO 1. Good for popular music.
					Ein hellerer Klavierklang als GRAND PIANO 1. Gut für Pop-Musik.
					Sonorité de piano plus brillante GRAND PIANO 1. Excellent pour la musique populaire. Piano que suena con mayor claridad que GRAND PIANO 1. Es bueno para música popular.
GRAND PIANO 2	○	○	○	○	A very bright piano sound good for rock music.
					Ein sehr heller Pianoklang, der sich gut für Rock eignet.
					Sonorité de piano très brillante convenant parfaitement pour la musique de rock.
					Sonido de piano muy claro para música rock.
VARIATION	○	○	○	○	A honky-tonk piano sound that is an enjoyable variation from the grand piano voices.
					Ein Honky-Tonk-Pianosound, eine angenehme Abwechslung vom Konzertflügelklang.
					Sonorité de piano honky-tonk qui est une variation agréable des voix du piano à queue. Sonido de piano honky-tonk que es una variación divertida de las voces de piano de cola.
E.PIANO 1	—	○	○	—	An electronic piano sound created by FM synthesis. Extremely "musical" response with varying timbre according to keyboard dynamics. Good for standard popular music.
					Der auf FM-Synthese basierende Klang eines elektrischen Pianos. Extrem "musikalische" Ansprache mit anschlagdynamischen Timbrevariationen. Gut für normale Populärmusik.
					Sonorité de piano électronique créée par synthèse FM. Réponse extrêmement "musicale" avec un timbre variant en proportion de la dynamique du clavier. Excellent pour la musique populaire ordinaire.
					Sonido de piano electrónico creado con síntesis de FM. Tiene una respuesta muy "musical" con variación del timbre de acuerdo con la dinámica del teclado. Es bueno para música popular normal.
VARIATION	—	○	—	—	A synth-generated type electronic piano sound often heard in popular music. Used in the DUAL mode it blends well with an acoustic piano voice.
					Ein synthesizerartiger E-Piano-Klang, dem man in der Pop-Musik oft begegnet. Im DUAL-Modus harmonisiert er gut mit einer akustischen Klavierstimme.
					Sonorité synthé de piano électronique que l'on entend souvent dans la musique populaire. Utilisée en mode DUAL, elle se mélange bien avec une voix de piano acoustique.
					Sonido de piano electrónico generado con sintetización que se escucha normalmente en la música popular. Cuando se emplea en el modo DUAL, se combina bien con una voz de piano acústico.
E.PIANO 2	—	○	○	○	The sound of an electric piano using hammer-struck metallic "tines". Soft tone when played lightly, and an aggressive tone when played hard.
					Der Sound eines elektrischen Pianos mit metallischen "Hammeranschlag-Spitzen". Bei leichtem Anschlagen erhält man einen weichen Klang, mit zunehmender Anschlagstärke einen aggressiveren Sound.
					Sonorité de piano électrique se servant de "pointes" métalliques de frappe de marteau. Sonorité atténuée lorsque les touches sont frappées légèrement et sonorité agressive lorsque le jeu est plus dur.
					Sonido de piano eléctrico que usa los tonos metálicos de golpe de martillo. Es un tono suave cuando se toca con delicadeza, y es un tono agresivo cuando se toca con fuerza.
VARIATION	—	○	—	—	A slightly different electric piano sound often heard in rock and popular music.
					Ein etwas anderer E-Piano-Sound, im Rock- und Pop-Geschehen weit verbreitet.
					Sonorité électrique de piano légèrement différente que l'on entend souvent dans la musique de rock et la musique populaire. Sonido de piano eléctrico un poco distinto que se oye frecuentemente en la música rock y popular.
HARPSI-CHORD	○	—	—	○	The definitive instrument for baroque music. Since harpsichord uses plucked strings, there is no touch response. There is, however, a characteristic additional sound when the keys are released.
					Cembalo, das maßgebliche Instrument der Barockmusik. Da die Saiten bei diesem Instrument angezupft werden, spricht diese Stimme nicht auf Anschlagdynamik an. Beim Freigeben der Tasten ist jedoch ein zusätzlicher charakteristischer Klang zu hören.
					L'instrument définitif pour la musique baroque. Étant donné que la harpe se sert de cordes pincer, il n'existe aucune réponse de touche. Cependant, cette sonorité supplémentaire caractéristique est obtenue lorsque les touches sont relâchées.
					El instrumento perfecto para música barroca. Puesto que el clavicordio emplea cuerdas de punteado, no hay respuesta a la pulsación. Sin embargo, hay un sonido característico adicional al soltar las teclas.
VARIATION	○	—	—	○	Mixes the same voice an octave higher for a more brilliant tone.
					Mischt dieselbe, um eine Oktave gehobene Stimme dazu, um einen brillanteren Klang zu erzeugen.
					Mélange la même voix une octave plus haut pour obtenir une tonalité plus brillante. Mezcla la misma voz una octava más alta para conseguir un tono más brillante.

Voice Descriptions/Beschreibung der Stimmen/Descriptions des voix/ Descripciones de las voces

Voice Name	Stereo Sampling	Touch Response	Dynamic Sampling*1	Key-off Sampling*2	Voice Descriptions
E.CLAVI-CHORD	—	○	—	○	A hammer-struck keyboard instrument that utilizes an electric pickup that is often heard in funk and soul music. Its tone is noted for the unique sound produced when the keys are released.
					Ein Hammeranschlag-Tasteninstrument mit elektrischem Tonabnehmer, dem man in Funk- und Soul-Musik oft begegnet. Sein Sound ist für den einzigartigen Klang berühmt, der beim Freigeben der Tasten entsteht.
					Sonorité d'un instrument à clavier frappé par un marteau qui utilise un phonocapteur électrique que l'on entend souvent dans la musique funk et soul. Sa tonalité est remarquable notamment pour le son unique produit quand les touches sont relâchées.
					Instrumento de teclado de golpe de martillo que emplea un fonocaptor eléctrico que se oye frecuentemente en música funk y soul. Su tono se destaca por el sonido propio producido al soltar las teclas.
VARIATION	—	○	—	○	Includes a unique preset effect.
					Mit einem einzigartigen Preset-Effekt.
					Inclut un effet preset unique.
					Incluye un efecto preajustado exclusivo.
VIBRAPHONE	○	○	○	—	Vibraphone played with relatively soft mallets. The tone becomes more metallic the harder you play.
					Das Vibraphon wird mit relativ weichen Schlegeln gespielt. Je härter der Anschlag, um so metallischer wirkt der Klang.
					Vibraphone joué avec des maillets relativement souples. La sonorité devient plus métallique au fur et à mesure que le jeu des touches est plus dur.
					Vibráfono tocado con mazos relativamente blandos. El tono pasa a ser más metálico a medida que se toca con más fuerza.
VARIATION	○	○	○	—	Mixes the same voice an octave higher for a clear attack with a bright feeling.
					Mischt dieselbe, um eine Oktave gehobene Stimme dazu, um eine scharfe Einschwingung mit hellem Klangcharakter zu erzeugen.
					Mélange la même voix une octave plus haut pour obtenir une attaque claire et produire une sensation de clarté.
					Mezcla la misma voz una octava más alta para conseguir un ataque con sensación más clara.
CHURCH ORGAN	○	—	—	—	This is a typical pipe organ sound (8 feet + 4 feet + 2 feet). Good for sacred music from the Baroque period.
					Ein typischer Pfeifenorgelklang (8' + 4' + 2'). Gut für Kirchenmusik aus dem Barockzeitalter.
					Sonorité d'orgue typique (8 pieds + 4 pieds + 2 pieds). Convient parfaitement pour la musique sacrée ou la musique baroque.
					Es el sonido de un órgano de tubos típico (8 pies + 4 pies + 2 pies). Es bueno para música sacra del período Barroco.
VARIATION	○	—	—	—	This is the organ's full coupler sound often associated with Bach's "Tocatta and Fugue".
					Dies ist der Orgelklang mit voller Kopplung, der oft mit Bachs "Tocatta und Fuge" assoziiert wird.
					C'est la sonorité d'orgue à tirant à accoupler total qui est suivant associée à la "Tocatta et fugue" de Bach.
					Es el sonido de pedal de acoplo completo de órgano frecuentemente asociado con la "Tocata y fuga" de Bach.
JAZZ ORGAN	—	—	—	—	The sound of a "tonewheel" type electric organ. Often heard in jazz and rock idioms.
					Der Sound einer "Tonewheel"-Elektroorgel. In Jazz- und Rockidiomen weit verbreitet.
					Sonorité d'une molette de courbure du son de type orgue électrique. Souvent entendue dans les dialectes de jazz et de rock.
					Sonido de un órgano eléctrico del tipo "rueda fónica". Se oye normalmente en estilos de jazz y rock.
VARIATION	—	—	—	—	Uses a rotary speaker effect with a different speed. The variation's speed is faster. If the variation is selected while holding a chord, the speed of the effect will gradually change.
					Basiert auf einem anderen Rotoreffekt mit unterschiedlicher Geschwindigkeit. Die Geschwindigkeit der Variation ist schneller. Wenn die Variation bei gehaltenem Akkord gewählt wird, ändert sich die Effektgeschwindigkeit allmählich.
					Se sert d'un effet rotatoire de haut-parleur avec une vitesse différente. La variation de vitesse est plus rapide. Si la variation est sélectionnée tout en maintenant un accord, la vitesse de l'effet changera graduellement.
					Emplea un efecto de altavoz rotativo a velocidad distinta. La velocidad de variación es más rápida. Si se selecciona la variación mientras se retiene un acorde, la velocidad del efecto cambiará gradualmente.
STRINGS	—	○	—	—	A large string ensemble. Try combining this voice with piano in the DUAL mode.
					Ein großes Streicherensemble. Probieren Sie diese Stimme einmal kombiniert mit Piano im Dualmodus aus.
					Grand ensemble à cordes. Essayez d'associer cette voix avec le piano en mode DUAL.
					Un conjunto de instrumentos de cuerdas grande. Pruebe combinando esta voz con la de piano en el modo DUAL.
VARIATION	—	○	—	—	A string ensemble voice with a slow attack. Try combining this voice with a piano or electric piano in the DUAL mode.
					Eine Streicherensemblestimme mit langsamer Einschwingung. Probieren Sie diese Stimme im DUAL-Modus in Kombination mit einem Klavier- oder E-Piano-Sound.
					Voix d'ensemble à cordes avec une attaque lente. Essayez de combiner cette voix avec un piano ou un piano électrique en mode DUAL.
					Voz de conjunto de instrumentos de cuerdas con ataque lento. Pruebe combinando esta voz con un piano acústico o piano eléctrico en el modo DUAL.

Voice Descriptions/Beschreibung der Stimmen/Descriptions des voix/ Descripciones de las voces

Voice Name	Stereo Sampling	Touch Response	Dynamic Sampling*1	Key-off Sampling*2	Voice Descriptions
CHOIR	—	○	—	—	A big, spacious choir voice. Perfect for creating rich harmonies in slow pieces.
					Ein satter, reichhaltiger Klang. Perfekt zur Erzeugung voller Harmonien in Stücken mit langsamem Tempo.
					Une ample et spacieuse voix de chœur. Convient parfaitement pour créer de riches harmoniques dans les passages lents.
VARIATION	—	○	—	—	Una voz de coros grande y espaciosa. Es perfecta para crear ricas armonías de piezas lentas.
					A choir voice with a slow attack. Try combining this voice with a piano or electric piano in the DUAL mode.
					Eine Chorstimme mit langsamer Einschwingung. Probieren Sie diese Stimme im DUAL-Modus in Kombination mit einem Klavier- oder E-Piano-Sound.
GUITAR	○	○	—	—	Voix de chœur avec une attaque lente. Essayez de combiner cette voix avec un piano ou un piano électrique en mode DUAL.
					Una voz de coros con ataque lento. Pruebe combinando esta voz con un piano acústico o piano eléctrico en el modo DUAL.
					This is a lively nylon string guitar voice that is sampled in stereo. When played hard it produces harmonics for a more natural guitar sound. Try using this voice to its full potential while soloing.
VARIATION	○	○	—	—	Eine sprühende Gitarrenstimme (Kunststoffsaiten), deren Samples stereo aufgenommen wurden. Bei hartem Anschlag erzeugen Harmonien einen natürlicheren Gitarrenklang. Eine Stimme, die in Solos voll ausgeschöpft werden kann.
					C'est une voix de guitare à cordes en nylon très vivante qui est échantillonnée en stéréo. Une fois jouée avec plus de force, cela produit des harmoniques pour un son de guitare plus normal. Essayez d'utiliser cette voix à sa pleine capacité en solo.
					Es una voz de guitarra de cuerdas de nailon de gran claridad muestreada en estéreo. Cuando se toca con fuerza, produce las armónicas para un sonido de guitarra más natural. Pruebe esta voz en todo su potencial al interpretar solos.
WOOD BASS	—	○	—	—	A softer attack that is good for mellower songs.
					Eine weichere Einschwingung, die sich für sanftere Songs eignet.
					Attaque plus douce qui est convient pour des chansons avec plus de maturité.
VARIATION	—	○	—	—	Un ataque más suave que es bueno para canciones más tiernas.
					An upright bass played fingerstyle. Ideal for jazz and Latin music.
					Ein mit den Fingern gespielter Kontrabaß. Ideal für Jazz und lateinamerikanische Musik.
E.BASS	—	○	—	—	Sorte de doigté de basse droite. Convient parfaitement pour la musique de jazz et la musique latine.
					Contrabajo tocado con punteado. Es ideal para jazz y música latina.
					Adds a cymbal voice to the bass sound. Ideal for walking bass lines in jazz tunes.
VARIATION	—	○	—	—	Erweitert den Baßklang um einen Beckensound. Ideal für fortschreitende Baßlinien in Jazz-Stücken.
					Ajoute une voix cymbale au son grave. Idéal pour les lignes basses de marche dans les accords de jazz.
					Añade una voz de platillos al sonido de bajo. Es ideal para líneas de bajo de piezas de jazz.
E.BASS	—	○	—	—	Electric bass for a wide range of music styles, jazz, rock, popular, and more.
					E-Baß für eine Reihe von Musikrichtungen wie Jazz, Rock, Pop usw.
					Basse électrique destinée à une vaste gamme de styles de musique de jazz, rock, populaire et autres.
VARIATION	—	○	—	—	Bajo eléctrico para una amplia variedad de estilos de música, jazz, rock, popular, y otros.
					A fretless bass good for styles such as jazz, fusion, etc.
					Ein bundloser Baß, der sich gut für Jazz, Fusion und ähnliche Musikrichtungen eignet.
					Basse sans irritation convenant parfaitement pour les styles tels que le jazz, la fusion, etc.
					Un bajo sin trastes bueno para estilos tales como jazz, fusión, etc.

*1 Dynamic Sampling provides multiple velocity-switched samples to accurately simulate the timbral response of an acoustic piano.

*2 Contains a very subtle sample that is produced when the keys are released.

*1 "Dynamic Sampling" hält mehrere "Velocity-switched Samples" bereit, die anschlagdynamisch gesteuert wiedergegeben werden und so die bei unterschiedlicher Anschlagstärke erzeugten klanglichen Variationen eines akustischen Instruments reproduzieren.

*2 Enthält ein äußerst zartes Sample, das die Freigabe von Tasten nuanciert.

*1 L'échantillonnage dynamique procure des échantillons multiples commutés permettant de simuler avec une précision remarquable le timbre d'un piano acoustique.

*2 Contient un échantillon très subtile qui est produit quand les touches sont relâchées.

*1 El muestreo dinámico proporciona múltiples muestras de velocidad cambiada para simular con precisión la respuesta del timbre de un piano acústico.

*2 Contiene una muestra muy sutil producida al soltar las teclas.

Preset Song List/Verzeichnis der Preset-Songs/ Liste des morceaux de musique de preset/ Lista de canciones preajustadas

No.	Title	Composer	No.	Title	Composer
1	Invention No. 1	J.S.Bach	26	Etude op.10-12 "Revolutionary"	F.F.Chopin
2	Invention No. 8	J.S.Bach	27	Valse op.64-1 "Petit chien"	F.F.Chopin
3	Gavotte	J.S.Bach	28	Valse op.64-2	F.F.Chopin
4	Prelude (Wohltemperierte Klavier I No.1)	J.S.Bach	29	Valse op.69-1 "L'adieu"	F.F.Chopin
5	Menuett G dur BWV.Anh.114	J.S.Bach	30	Nocturne op.9-2	F.F.Chopin
6	Le Coucou	L-C.Daquin	31	Träumerei	R.Schumann
7	Piano Sonate No.15 K.545 1st mov.	W.A.Mozart	32	Fröhlicher Landmann	R.Schumann
8	Turkish March	W.A.Mozart	33	La prière d'une Vierge	T.Badarzewska
9	Menuett G dur	W.A.Mozart	34	Dolly's Dreaming and Awakening	T.Oesten
10	Little Serenade	J.Haydn	35	Arabesque	J.F.Burgmüller
11	Perpetuum mobile	C.M.v.Weber	36	Pastorale	J.F.Burgmüller
12	Ecossaise	L.v.Beethoven	37	La chevaleresque	J.F.Burgmüller
13	Für Elise	L.v.Beethoven	38	Liebesträume Nr.3	F.Liszt
14	Marcia alla Turca	L.v.Beethoven	39	Blumenlied	G.Lange
15	Piano Sonate op.13 "Pathétique" 2nd mov.	L.v.Beethoven	40	Barcarolle	P.I.Tchaikovsky
16	Piano Sonate op.27-2 "Mondschein" 1st mov.	L.v.Beethoven	41	Melody in F	A.Rubinstein
17	Piano Sonate op.49-2 1st mov.	L.v.Beethoven	42	Humoresque	A.Dvořák
18	Impromptu op.90-2	F.P.Schubert	43	Tango (España)	I.Albéniz
19	Moments Musicaux op.94-3	F.P.Schubert	44	The Entertainer	S.Joplin
20	Frühlingslied op.62-2	J.L.F.Mendelssohn	45	Maple Leaf Rag	S.Joplin
21	Jägerlied op.19b-3	J.L.F.Mendelssohn	46	La Fille aux Cheveux de Lin	C.A.Debussy
22	Fantaisie-Impromptu	F.F.Chopin	47	Arabesque 1	C.A.Debussy
23	Prelude op.28-15 "Raindrop"	F.F.Chopin	48	Clair de lune	C.A.Debussy
24	Etude op.10-5 "Black keys"	F.F.Chopin	49	Rêverie	C.A.Debussy
25	Etude op.10-3 "Chanson de l'adieu"	F.F.Chopin	50	Golliwog's Cakewalk	C.A.Debussy

Factory Setting List/Liste der Vorgabeeinstellungen/ Liste des réglages/Lista de ajustes de fábrica

		Backup Group
Voice	GRAND PIANO 1	F9.1
Variation	OFF	
Dual Mode	OFF	
Split Mode	OFF	
Split Mode Left Voice	WOOD BASS	
Reverb Type	Preset for each voice	
Reverb Depth	Preset for each voice	
Effect Type	Preset for each voice	
Effect Depth	Preset for each voice	
Touch Sensitivity	MEDIUM	
Volume in the FIXED Mode	64	
Metronome	OFF	—
Metronome Time Signature	0 (no accent)	F9.1
Tempo	120	—
Transpose	0	F9.3

“—”: Not memorized

Function

	Function	Default	Backup Group
F1	Tuning	A3=440Hz	F9.3
F2.1	Scale	1 (Equal Temperament)	
F2.2	Base Note	C	
F3.1	Dual Balance	Preset for each voice combination	F9.1
F3.2	Dual Detune	Preset for each voice combination	
F3.3, F3.4	Dual Octave Shift	Preset for each voice combination	
F3.5, F3.6	Dual Effect Depth	Preset for each voice combination	
F4.1	Split Point	F#2	
F4.2	Split Balance	Preset for each voice combination	
F4.3, F4.4	Split Octave Shift	Preset for each voice combination	
F4.5, F4.6	Split Effect Depth	Preset for each voice combination	
F4.7	Sustain Pedal Range	ALL	F9.4
F4.8	AUX Pedal Range	ALL	
F5.1	AUX PEDAL Mode	1 (Soft Pedal)	
F5.2	Sustain Sample Depth	12	
F5.3	Soft Pedal Effect Depth	3	
F5.4	SUSTAIN PEDAL Type	1	F9.1
F5.5	AUX PEDAL Type	1	
F6	Metronome Volume	10	
F7	Preset Song Part Cancel Volume	5	F9.2
F8.1	MIDI Transmit Channel	1	
F8.2	MIDI Receive Channel	ALL	
F8.3	Local Control	ON	
F8.4	Program Change Send & Receive	ON	
F8.5	Control Change Send & Receive	ON	
F8.6	MIDI Transmit Transpose	0	Always backed up
F9	Backup	All OFF	

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

If you're already very familiar with MIDI, or are using a computer to control your music hardware with computer-generated MIDI messages, the data provided in this section can help you to control the P-120/P-120S.

Falls Sie bereits mit MIDI vertraut sind oder einen Computer zur Erzeugung von MIDI-Steuermeldungen für die Instrumente verwenden, können Sie sich zur Steuerung des P-120/P-120S nach den im folgenden Abschnitt aufgeführten Spezifikationen richten.

1. NOTE ON/OFF

Data format: [9nH] -> [kk] -> [vv]

9nH = Note ON/OFF event (n = channel number)
kk = Note number (Transmit: 09H ~ 78H = A-2 ~ C8 /
Receive: 00H ~ 7FH = C-2 ~ G8)*
vv = Velocity (Key ON = 01H ~ 7FH, Key OFF = 00H)

Data format: [8nH] -> [kk] -> [vv] (reception only)

8nH = Note OFF event (n = channel number)
kk = Note number: 00H ~ 7FH = C-2 ~ G8
vv = Velocity

* If received value exceeds the supported range for the selected voice, the note is adjusted by the necessary number of octaves.

2. CONTROL CHANGE

Data format: [BnH] -> [cc] -> [vv]

BnH = Control change (n = channel number)
cc = Control number
vv = Data Range

(1) Bank Select

ccH	Parameter	Data Range (vvH)
00H	Bank Select MSB	00H:Normal
20H	Bank Select LSB	00H...7FH

Bank selection processing does not occur until receipt of next Program Change message.

(2) Main Volume (reception only)

ccH	Parameter	Data Range (vvH)
07H	Volume MSB	00H...7FH

(3) Expression

ccH	Parameter	Data Range (vvH)
0BH	Expression MSB	00H...7FH

(4) Damper

ccH	Parameter	Data Range (vvH)
40H	Damper MSB	00H...7FH

(5) Sostenuto

ccH	Parameter	Data Range (vvH)
42H	Sostenuto	00H-3FH:off, 40H-7FH:on

(6) Soft Pedal

ccH	Parameter	Data Range (vvH)
43H	Soft Pedal	00H-3FH:off, 40H-7FH:on

(7) Effect1 Depth (Reverb Send Level)

ccH	Parameter	Data Range (vvH)
5BH	Effect1 Depth	00H...7FH

Adjusts the reverb send level.

(8) Effect4 Depth (Variation Effect Send Level)

ccH	Parameter	Data Range (vvH)
5EH	Effect4 Depth	00H...7FH

Si vous êtes très familier avec l'interface MIDI ou si vous utilisez un ordinateur pour commander votre matériel de musique au moyen de messages MIDI générés par ordinateur, les données suivantes vous seront utiles et vous aideront à commander le P-120/P-120S.

Si usted está ya familiarizado con MIDI, o si emplea una computadora para controlar sus aparatos musicales con mensajes MIDI generados por computadora, los datos proporcionados en esta sección le ayudarán a controlar la P-120/P-120S.

3. MODE MESSAGES

Data format: [BnH] -> [cc] -> [vv]

BnH = Control event (n = channel number)
cc = Control number
vv = Data Range

(1) All Sound Off

ccH	Parameter	Data Range (vvH)
78H	All Sound Off	00H

Switches off all sound from the channel. Does not reset Note On and Hold On conditions established by Channel Messages.

(2) Reset All Controllers

ccH	Parameter	Data Range (vvH)
79H	Reset All Controllers	00H

Resets controllers as follows.

Controller	Value
Expression	127 (max)
Damper Pedal	0 (off)
Sostenuto	0 (off)
Soft Pedal	0 (off)

(3) Local Control (reception only)

ccH	Parameter	Data Range (vvH)
7AH	Local Control	00H (off), 7FH (on)

(4) All Notes Off

ccH	Parameter	Data Range (vvH)
7BH	All Notes Off	00H

Switches OFF all the notes that are currently ON on the specified channel. Any notes being held by the damper or sostenuto pedal will continue to sound until the pedal is released.

(5) Omni Off (reception only)

ccH	Parameter	Data Range (vvH)
7CH	Omni Off	00H

Same processing as for All Notes Off.

(6) Omni On (reception only)

ccH	Parameter	Data Range (vvH)
7DH	Omni On	00H

Same processing as for All Notes Off.

(7) Mono (reception only)

ccH	Parameter	Data Range (vvH)
7EH	Mono	00H

Same processing as for All Sound Off.

(8) Poly (reception only)

ccH	Parameter	Data Range (vvH)
7FH	Poly	00H

Same processing as for All Sound Off.

- When control change reception is turned OFF in the Function mode, control change data will not be transmitted or received except for Bank Select and Mode messages.
- Local on/off, OMNI on/off are not transmitted. (The appropriate note off number is supplied with "All Note Off" transmission).
- When a voice bank MSB/LSB is received, the number is stored in the internal buffer regardless of the received order, then the stored value is used to select the appropriate voice when a program change message is received.
- The Multi-timbre and Poly modes are always active. No change occurs when OMNI ON, OMNI OFF, MONO, or POLY mode messages are received.

4. PROGRAM CHANGE

Data format: [CnH] -> [ppH]

CnH = Program event (n = channel number)
ppH = Program change number

P.C.#=Program Change number

Voice Name	MSB	LSB	P.C.#
GRAND PIANO 1	0	112	0
VARIATION	0	113	0
GRAND PIANO 2	0	112	1
VARIATION	0	113	1
E.PIANO 1	0	112	5
VARIATION	0	112	88
E.PIANO 2	0	112	4
VARIATION	0	113	4
HARPSICHORD	0	112	6
VARIATION	0	113	6
E.CLAVICHORD	0	112	7
VARIATION	0	113	7
VIBRAPHONE	0	112	11
VARIATION	0	113	11
CHURCH ORGAN	0	112	19
VARIATION	0	113	19
JAZZ ORGAN	0	112	16
VARIATION	0	113	16
STRINGS	0	112	48
VARIATION	0	113	48
CHOIR	0	112	52
VARIATION	0	113	52
GUITAR	0	112	24
VARIATION	0	113	24
WOOD BASS	0	112	32
VARIATION	0	113	32
E.BASS	0	112	33
VARIATION	0	113	33

- When program change reception is turned OFF in the Function mode, no program change data is transmitted or received. Also, Bank MSB/LSB is not transmitted or received.

5. SYSTEM REALTIME MESSAGES

[rrH]
F8H: Timing clock
FAH: Start
FCH: Stop
FEH: Active sensing

Data	Transmission	Reception
F8H	Transmitted every 96 clocks	Received as 96-clock tempo timing when MIDI clock is set to External
FAH	Recorder start	Recorder start Not received when the MIDI clock is set to Internal.
FCH	Recorder stop	Recorder stop Not received when the MIDI clock is set to Internal.
FEH	Transmitted every 200 milliseconds	If a signal is not received via MIDI for more than 400 milliseconds, the same processing will take place for All Sound Off, All Notes Off and Reset All Controllers as when those signals are received.

- Caution: If an error occurs during MIDI reception, the Damper, Sostenuto, and Soft effects for all channels are turned off and an All Note Off occurs.

6. SYSTEM EXCLUSIVE MESSAGES (Yamaha MIDI Format)

Panel Data Transmit

Data format: [F0H] -> [43H] -> [0nH] -> [7CH] -> ... -> [F7H]

F0H, 43H, 0nH, 7CH (n: channel number)
00H, 2DH (data length)
43H, 4CH, 20H, 20H (CL)
43H, 4CH, 50H, 27H, 30H, 31H (CLP01)
30H, 30H (version x, y)
[PANEL DATA]
[CHECK SUM (1byte)] = 0-(43H+4CH+20H+.....+Data end)
F7H

• Panel Data Contents

- | | |
|--------------------------------|-------------------------------|
| (1) 1'st Voice | (18) Split Dumper Mode |
| (2) Dual On/Off | (19) AUX Pedal Mode |
| (3) Dual Voice | (20) Reverb Type 1 |
| (4) Dual Balance | (21) Reverb Type 2 |
| (5) Dual Detune | (22) Reverb Depth 1 |
| (6) Dual Voice1 Octave | (23) Reverb Depth 2 |
| (7) Dual Voice2 Octave | (24) Effect Type 1 |
| (8) Dual Voice1 Effect Depth | (25) Effect Type 2 |
| (9) Dual Voice2 Effect Depth | (26) Effect Depth |
| (10) Split On/Off | (27) Variation On/Off |
| (11) Split Voice | (28) Touch Sensitivity |
| (12) Split Point | (29) Fixed Data |
| (13) Split Balance | (30) AUX Pedal |
| (14) Split Voice1 Octave | (31) Soft Pedal Depth |
| (15) Split Voice2 Octave | (32) Absolute tempo low byte |
| (16) Split Voice1 Effect Depth | (33) Absolute tempo high byte |
| (17) Split Voice2 Effect Depth | |

- Panel data send requests cannot be received.

7. SYSTEM EXCLUSIVE MESSAGES (Universal System Exclusive)

(1) Universal Realtime Message

Data format: [F0H] -> [7FH] -> [XnH] -> [04H] -> [01H] -> [//H] -> [mmH] -> [F7H]

MIDI Master Volume

- Simultaneously changes the volume of all channels.
- When a MIDI master volume message is received, the volume only has affect on the MIDI receive channel, not the panel master volume.

F0H = Exclusive status
7FH = Universal Realtime
7FH = ID of target device
04H = Sub-ID #1=Device Control Message
01H = Sub-ID #2=Master Volume
//H = Volume LSB
mmH = Volume MSB
F7H = End of Exclusive

or

F0H = Exclusive status
7FH = Universal Realtime
XnH = When n is received n=0~F, whichever is received.
X = don't care
04H = Sub-ID #1=Device Control Message
01H = Sub-ID #2=Master Volume
//H = Volume LSB
mmH = Volume MSB
F7H = End of Exclusive

(2) Universal Non-Realtime Message (GM On)

General MIDI Mode On

Data format: [F0H] -> [7EH] -> [XnH] -> [09H] -> [01H] -> [F7H]

- F0H = Exclusive status
- 7EH = Universal Non-Realtime
- 7FH = ID of target device
- 09H = Sub-ID #1=General MIDI Message
- 01H = Sub-ID #2=General MIDI On
- F7H = End of Exclusive

or

- F0H = Exclusive status
- 7EH = Universal Non-Realtime
- XnH = When received, n=0~F.
X = don't care
- 09H = Sub-ID #1=General MIDI Message
- 01H = Sub-ID #2=General MIDI On
- F7H = End of Exclusive

When the General MIDI mode ON message is received, the MIDI system will be reset to its default settings.

This message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

8. SYSTEM EXCLUSIVE MESSAGES (XG Standard)

(1) XG Native Parameter Change

Data format: [F0H] -> [43H] -> [1nH] -> [4CH] -> [hhH] -> [mmH] -> [//H] -> [ddH] -> [F7H]

- F0H = Exclusive status
- 43H = YAMAHA ID
- 1nH = When received, n=0~F.
When transmitted, n=0.
- 4CH = Model ID of XG
- hhH = Address High
- mmH = Address Mid
- //H = Address Low
- ddH = Data
- F7H = End of Exclusive

Data size must match parameter size (2 or 4 bytes).
When the XG System On message is received, the MIDI system will be reset to its default settings.
The message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

(2) XG Native Bulk Data (reception only)

Data format: [F0H] -> [43H] -> [0nH] -> [4CH] -> [aaH] -> [bbH] -> [hhH] -> [mmH] -> [//H] -> [ddH] ->...-> [ccH] -> [F7H]

- F0H Exclusive status
- 43H YAMAHA ID
- 0nH When received, n=0~F.
When transmitted, n=0.
- 4CH Model ID of XG
- aaH ByteCount
- bbH ByteCount
- hhH Address High
- mmH Address Mid
- //H Address Low
- ddH Data
- ccH Check sum
- F7H End of Exclusive

- Receipt of the XG SYSTEM ON message causes reinitialization of relevant parameters and Control Change values. Allow sufficient time for processing to execute (about 50 msec) before sending the P-120/P-120S another message.
- XG Native Parameter Change message may contain two or four bytes of parameter data (depending on the parameter size).
- For information about the Address and Byte Count values, refer to Table 1 below. Note that the table's Total Size value gives the size of a bulk block. Only the top address of the block (00H, 00H, 00H) is valid as a bulk data address.

9. SYSTEM EXCLUSIVE MESSAGES (Clavinova MIDI Format)

Data format: [F0H] -> [43H] -> [73H] -> [xxH] -> [nnH] -> [F7H]

- F0H = Exclusive status
- 43H = Yamaha ID
- 73H = Clavinova ID
- xxH = Product ID
(P-120/P-120S ID: 75H or CLP common ID: 01H)
- nnH = Substatus
 - nn Control
 - 02H Internal MIDI clock
 - 03H External MIDI clock
 - 06H Bulk Data (the bulk data follows 06H)
- F7H = End of Exclusive

* When nn=02H or 03H, Clavinova common ID (01H) is recognized as well as 75H.

BULK DUMP FORMAT

- F0H, 43H, 73H
- 75H = P-120/P-120S ID
- 06H = Bulk ID
- 05H = Sequence data
- 0nH, 0nH, 0nH, 0nH, 0nH, 0nH, 0nH, 0nH = Data length
- [BULK DATA]
- [CHECK SUM (1byte)] = 0-sum (BULK DATA)
- F7H = End of Exclusive

10. SYSTEM EXCLUSIVE MESSAGES (Special Control)

Data format: [F0H] -> [43H] -> [73H] -> [66H] -> [11H] -> [0nH] -> [ccH] -> [vvH] -> [F7H]

- F0H = Exclusive status
- 43H = Yamaha ID
- 73H = Clavinova ID
- 75H = P-120/P-120S ID
- 11H = Special control
- 0nH = Control MIDI change (n=channel number)
- cc = Control number
- vv = Value
- F7H = End of Exclusive

Control	0n	ccH	vvH
Split Point	Always 00H	14H	14H : Split Key Number
Metronome	Always 00H	1BH	00H : off 01H : - 02H : 2/4 03H : 3/4 04H : 4/4 05H : 5/4 06H : 6/4 07H : No accent
Damper Level	ch: 00H-0FH	3DH	(Sets the Damper Level for each channel) 00H-7FH
Channel Detune	ch: 00H-0FH	43H	(Sets the Detune value for each channel) 00H-7FH
Voice Reserve	ch: 00H-0FH	45H	00H : Reserve off 7FH : on*

* When Volume, Expression is received for Reserve On, they will be effective from the next Key On. Reserve Off is normal.

11. SYSTEM EXCLUSIVE MESSAGES (Others)

Data format: [F0H] -> [43H] -> [1nH] -> [27H] -> [30H] -> [00H] -> [00H] -> [mmH] -> [//H] -> [ccH] -> [F7H]

Master Tuning (XG and last message priority) simultaneously changes the pitch of all channels.

- F0H = Exclusive Status
- 43H = Yamaha ID
- 1nH = When received, n=0~F.
When transmitted, n=0.
- 27H = Model ID of TG100
- 30H = Sub ID
- 00H =
- 00H =
- mmH = Master Tune MSB
- //H = Master Tune LSB
- ccH = don't care (under 7FH)
- F7H = End of Exclusive

<Table 1>

MIDI Parameter Change table (SYSTEM)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
00 00 00	4	020C - 05F4(*1)	MASTER TUNE	-50 - +50[cent]	00 04 00 00
01				1st bit 3 - 0 → bit 15 - 12	400
02				2nd bit 3 - 0 → bit 11 - 8	
03				3rd bit 3 - 0 → bit 7 - 4	
				4th bit 3 - 0 → bit 3 - 0	
04	1	00 - 7F	MASTER VOLUME	0 - 127	7F
05	1	—	—	—	—
06	1	34 - 4C(*2)	TRANSPOSE	-12 - +12[semitones]	40
7E		00	XG SYSTEM ON	00=XG sytem ON	
7F		00	RESET ALL PARAMETERS	00=ON (receive only)	
TOTAL SIZE	07				

*1: Values lower than 020CH select -50 cents. Values higher than 05F4H select +50 cents.

*2: Values from 28H through 33H are interpreted as -12 through -1. Values from 4DH through 58H are interpreted as +1 through +12.

<Table 2>

MIDI Parameter Change table (EFFECT 1)

Refer to the "Effect MIDI Map" for a complete list of Reverb, Chorus and Variation type numbers.

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
02 01 00	2	00-7F	REVERB TYPE MSB	Refer to Effect MIDI Map	01(=HALL1)
		00-7F	REVERB TYPE LSB	00 : basic type	00
02 01 40	2	00-7F	VARIATION TYPE MSB	Refer to Effect MIDI Map	00(=Effect off)
		00-7F	VARIATION TYPE LSB	00 : basic type	00

* "VARIATION" refers to the EFFECT on the panel.

<Table 3>

MIDI Parameter Change table (MULTI PART)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
08 nn 11	1	00 - 7F	DRY LEVEL	0 - 127	7F

nn = Part Number

● Effect MIDI Map

REVERB

	MSB	LSB
ROOM	02H	10H
HALL 1	01H	10H
HALL 2	01H	11H
STAGE	03H	10H
Sound board	03H	12H

EFFECT

	MSB	LSB
CHORUS	42H	10H
PHASER	48H	10H
TREMOLO	42H	12H
DELAY	05H	10H

MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
Basic Default Channel Changed	1 1 - 16	1 1 - 16	
Mode Default Messages Altered	3 × *****	1 × ×	*1 Poly Mode only
Note Number : True voice	9 - 120 *****	0 - 127 0 - 127	
Velocity Note ON Note OFF	○ 9nH, v=1 - 127 ○ 9nH, v=0	○ 9nH, v=1 - 127 ○ 9nH, v=0 or 8nH	
After Touch Key's Ch's	× ×	× ×	
Pitch Bender	×	×	
Control Change 0, 32 7 11 64 66 67 91 94	○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○	Bank Select Volume Expression Damper Sostenuto Soft pedal Reverb Depth Effect Depth
Program Change : True #	○ *****	○	
System Exclusive	○	○	
: Song Position Common : Song Select : Tune	× × ×	× × ×	
System : Clock Real Time : Commands	○ ○	○ ○	
Aux : All sounds off : Reset All Controllers : Local ON/OFF Mes- : All Notes OFF sages : Active Sense : Reset	× × × × ○ ×	○ (120, 126, 127) ○ (121) ○ (122) ○ (123 - 125) ○ ×	

Notes : *1 = Recieve Mode is always multi timbre and Poly mode.

Specifications/Technische Daten/Caractéristiques techniques/ Especificaciones

KEYBOARD	88 KEYS (A-1 ~ C7)
POLYPHONY	64 NOTES MAX.
VOICE SELECTORS	14 voices + Variation for each voice
REVERB	ROOM, HALL 1, HALL 2, STAGE
EFFECT	CHORUS, PHASER, TREMOLO, DELAY
TOUCH SENSITIVITY	HARD, MEDIUM, SOFT, FIXED
SONG CONTROLS	PRESET, USER 1, 2, 3, TRACK 1, 2, START/STOP, REC
PEDAL CONTROL	SUSTAIN PEDAL (Can be used like a half pedal effect), AUX PEDAL (Can be assigned a wide variety of functions)
DEMO SONGS	14 voice demo songs, 50 preset songs
OTHER CONTROLS	MASTER VOLUME, BRILLIANCE, DEMO, TRANSPOSE, SPLIT, METRONOME START/STOP, TEMPO/FUNCTION# ▼/▲, TEMPO/FUNCTION#, -/NO▼, +/YES▲, LED Display
JACKS/CONNECTORS	AUX OUT : L and R (LEVEL FIXED) Pin Jacks, AUX OUT : L/L+R and R Phone Jacks, MIDI IN/OUT, HOST SELECT, TO HOST, PHONES × 2, SUSTAIN PEADL, AUX PEADL, SPEAKER, DC IN 16V
MAIN AMPLIFIER	12.5 W × 2
SPEAKER	Oval (12 cm × 6 cm) × 2
POWER SUPPLY	Yamaha PA-300 power adaptor (or an equivalent recommended by Yamaha)
POWER CONSUMPTION	28 W
DIMENTIONS (W x D x H)	1,354 × 334 × 137 mm (53-5/16" × 13-1/8" × 5-3/8")
WEIGHT	18.6 kg (40 lbs. 15 oz.)
INCLUDED ACCESSORIES	Owner's Manual, Music Stand, Pedal, PA-300 AC Adaptor (included or optional depending on locale)
OPTIONAL ACCESSORY	Keyboard Stand L-120/120S

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(class B)

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